

**EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION  
TECHNIQUE ON STRESS, ANXIETY AND DEPRESSION  
IN INFERTILE WOMEN AT A SELECTED  
HOSPITAL, ERODE.**

**By**

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**A DISSERTATION SUBMITTED TO  
THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,  
IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE  
DEGREE OF MASTER OF SCIENCE IN NURSING  
PSYCHIATRIC (MENTAL HEALTH) NURSING**

**APRIL – 2011**

## **CERTIFICATE**

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## ACKNOWLEDGEMENT

First and foremost, I am greatly indebted and pleased to thank **God Almighty** for his endless grace, love and blessings showered on me in presenting this dissertation successfully.

I am grateful to **Dr.K.Arthanari, M.S., Managing Trustee**, Sri Gokulam College of Nursing, Salem, who gave me the opportunity to do the dissertation.

I express my sincere and wholehearted gratitude to **Prof. Mrs.A.Jayasudha, M.Sc(N)., Ph.D., Principal**, Sri Gokulam College of Nursing, Salem, for her valuable suggestions and immense direction for conducting the study in a successful way.

I express my appreciation and gratefulness to my clinical speciality guide **Mrs. Lalitha P., M.Sc (N)., Professor** in Dept. of Mental Health Nursing, for her constant support, suggestions and encouragement at every stage which enabled me to complete this study.

I express my sincere gratitude to **Dr.C.Bhaskar, M.D.(Psych), Consultant Psychiatrist**, Sri Gokulam Hospital, for validating the tool, constant guidance and valuable suggestions.

I express my sincere gratitude and respectful thanks to **Mr.Michel Jayaraj**, Consultant Psychologist, Shanmuga Hospital, Salem for providing training in the Progressive Muscle Relaxation Technique and for his valuable suggestions.

It is the most pleasant time to express my gratitude and exclusive thanks to **Mrs.Kavitha, M.Sc.(N), Assistant Professor; Mrs.Devikanna, M.Sc.(N), Lecturer; Ms.Shoba Selvi, M.Sc.(N), Lecturer** Department of Mental Health Nursing for their innovative, constructive and diligent effort to ensure the best quality

in my work, which helped me to do my study in a wonderful and fruitful manner. Their inspiring words, will never be forgotten.

I express my appreciation and gratefulness to **Dr. (Mrs.) K. Tamizharasi, M.Sc. (N), Ph.D., Vice Principal**, for her innovative, constructive and constant guidance and valuable suggestions.

I express my sincere gratitude and respectful thanks to **Mrs.Kamini,M.Sc(N), Associate Professor**, Research co-ordinator, Sri Gokulam College of Nursing, Salem for her valuable suggestions and continuous support which made my study smooth and fruitful.

I am very grateful to **all faculty members** of Sri Gokulam College of Nursing, Salem, for their help and continuous support whenever needed.

I extend my sincere and special thanks to **Mr.Sivakumar M.Sc., M.Phil., Ph.D.**, Salem, for his support and guidance in statistical analysis and interpretation of data.

I am thankful to **Mr.Baskar, Mr.Rajendaran and Mrs.Madurambal**, Librarians, Sri Gokulam College of Nursing, Salem, for helping me to review and for extending library facilities throughout the study.

I extend my gratitude to **Mr. Jose Sebastian. P., MA (Eng), LLB.**, for the valuable editorial support.

I extend my heartfelt gratitude to **Dr. Sudhakar, Managing Director, Sudha Infertility Center, Erode**, for giving permission to conduct this study.

I express thanks to **Mr.L.Periyasamy, Mr.R.Manikandan and Mr. R. Karthik, Golden Printers** for their excellent and untiring effort in materializing my dissertation work.

I express my ovation of unrelenting love and gratitude to my parents **Mr.A.D.Vijayan, Mrs. Chandramathi.K.K.,** my sister **Ms.Aji C.Vijay** and my brother **Mr. Ayyappadas. V.,** for their fruitful prayers, endless patience, inspiration and support throughout this endeavor.

I also express my heartfelt gratitude to all my classmates and friends for their constant help throughout the study.

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## **ABSTRACT**

A Study to Determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women at a Selected Hospital, Erode. Evaluative approach with pre-experimental design was used for this study where non-probability convenience sampling technique was used to select the samples. Structured interview schedule was used to collect data from 40 samples regarding the level of stress, anxiety and depression. The collected data were analyzed by using descriptive and inferential statistics.

Findings revealed that, among 40 samples, 24 (60%) samples had mild stress in pre-test whereas only 1(2.5%) sample had mild stress and 39 (97.5%) samples had no stress in post-test. In pre-test, 29 (72.5%) samples had mild anxiety and 2 (5%) had severe anxiety whereas in post-test, 33 (82.5%) samples had mild anxiety and 7 (17.5%) had moderate anxiety. In pre-test, 4 (10%) samples had moderate depression and 4 (10%) had severe depression whereas in post-test, none of them had severe depression. This reveals that the level of stress, anxiety and depression was reduced in post-test when compared to pre-test. The paired 't' value for stress, anxiety and depression were 17.20, 8.78 and 9.87 respectively which were greater than the table value at  $p < 0.001$  level indicating that the difference in mean was true difference and Progressive Muscle Relaxation Technique was effective in reducing stress, anxiety and depression in infertile women. Significant association was found between family income per capita and type of infertility with the level of stress, age at puberty and previous history of abortion with the level of anxiety and age, family income per capita, age at marriage, duration of marital life, previous history of abortion and type of infertility with the level of depression.

## CHAPTER - I

### INTRODUCTION

*My mother is a poem  
I'll never be able to write,  
though everything I write  
is a poem to my mother.*

**-Sharon Doubiago**

Motherhood- it is a great gift of God. Fertility is highly respected in most cultures and the wish for a child is one of the most basic of all human motivations. Pregnancy and motherhood are developmental milestones for women that are highly emphasized by our culture. When attempts to have a child fall short, it can be an emotionally distressing experience.

Becoming a parent is viewed by most of the couples as their vital role in life, and the thought of not achieving it can be very stressful. Women particularly have been lifted traditionally to view motherhood as their major role. In India childlessness has devastating consequences for women because the blame is often put on the women. It results as a threat to women's identity and may influence their quality of marital life in terms of their inability to conceive.

Infertility is defined as 12 months of correctly timed intercourse that does not end in conception. It affects 10% -15% of the couples of reproductive age and most of them live in the developing countries. Sixty to eighty million people experience infertility around the world. Approximately 40% of the infertile couples have female factor infertility, 40% male factor and 20% a combination of both or infertility of unknown etiology (**WHO, 2001**).

The WHO estimates that 8-12% of couples around the world experience difficulty in conceiving a child. Approximately one in five (20%) couples experience

infertility or the inability to conceive or carry to live birth a pregnancy after one year of regular sexual intercourse without the use of contraceptives. Approximately 75% of couples diagnosed with infertility seek some type of treatment. Those who seek medical treatment, it is estimated that 50% to 60% will eventually conceive; compared to the 5% who would conceive even without seeking medical intervention. Infertility is usually experienced as an unexpected, unpleasant, undesired and negative life event (**Sandelowski, 1995**).

Infertility represents a complex physical, spiritual and emotional crisis and affects all areas of the women's health and wellbeing. The coexistence of infertility and psychological distress is supported by sound scientific evidence. Half of their sample rated infertility as the most stressful experience in their life. In addition they found that 18% of the men and 16% of the women had significant psychological distress including high levels of depression and somatization (**Freeman and colleagues, 1985**).

In recent years, the number of couples seeking treatment for infertility has increased dramatically due to factors such as postponement of child bearing in women, development of newer and more successful techniques for infertility treatment and increasing awareness of available services. This increasing participation in infertility treatment has raised awareness and inspired investigation into the psychological ramifications of infertility.

Research has shown that women who undergoing infertility treatment have a similar, and often greater level of stress than women dealing with life-threatening illnesses such as cancer and heart disease. Infertile couples experience chronic stress each month, initially hoping that they will conceive and then dealing with the dissatisfaction if they do not.

## Need for the Study

*The heart of a mother is a deep abyss...  
at the bottom of which you will always find forgiveness.*

**-Honoré de Balzac**

Mother is the visible God-she is the one who brings life to the earth. Motherhood is the most valuable role of a woman in her life. No one can take over this role.

Approximately 6.1 million women were there with impaired ability to have children; 9.2 million women never used infertility treatment services, 2.1 million married couples were infertile and 9.3 million women were using infertility treatment services in the United States. Besides, about 10 to 15% of couples of reproductive age in the United States had difficulty with conception and the ability to bear a child (**American Society of Reproductive Medicine, 2004**).

In our close-knit family structure, the married couples are expected to have a child after a year, and if this is not happening, pressure mounts on the couples. The couples may have postponed their parenthood for many reasons. In our traditional joint family set-up, the couples who are childless draw the attention and pressure from their parents, in-laws, relatives and even from the society itself. This leads to a situation where the couples experience an emotional conflict.

Parenthood is one of the major changeovers in adult life for both men and women. The stress of the non-fulfillment of a wish for a child has been related with the emotional consequences such as anger, depression, anxiety, marital problems, sexual dysfunction and social isolation. Couples experience stigma, sense of loss and reduced self-esteem because of their infertility (**Nachtigall, 1992**).

In infertile couples, women experience higher level of distress than their male partners (**Domar, 1992**).

Studies examining the psychological consequences of infertility have shown that infertility leads to emotional distress such as depression, anxiety, guilt, social isolation and decreased self-esteem in both men and women **(Zuraida.A.S., 2010)**.

In a study of gender differences in coping with infertility, it was found that women were vulnerable to the infertility crisis as manifested by lower level of self esteem, higher rates of depression and greater problems in the personal life and with the health care system **(Draye, Woods and Mitchen, 1988)**.

In many cultures, incapability to conceive holds a stigma. In closed social groups the degree of rejection may cause considerable anxiety and depression. Stress, depression and anxiety are depicted as common consequences of infertility. A number of studies have found that the occurrence of depression in infertile couples presenting for infertility treatment is significantly higher than in fertile controls, with prevalence estimates of major depression in the range of 15%-54% **(Domar, 1992)**.

Anxiety has also shown to be significantly higher in infertile couples when compared to the general population, with 8 – 28% of infertile couples reporting clinically significant anxiety **(Anderson, 2003)**.

In a research study it was found that 26.8% of the women undergoing Artificial Reproductive Technology met criteria for a mood disorder, 17% for major depression and 9.8% for dysthymia **(Zuraida, 2010)**.

There are so many therapies which provide relaxation to the infertile women. Progressive Muscle Relaxation Technique is one among the relaxation techniques which the researcher found cost effective and provides relaxation within a short period of time.

## **Statement of the Problem**

A study to determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women at a Selected Hospital, Erode.

## **Objectives**

- To assess the level of stress, anxiety and depression in infertile women.
- To determine the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women.
- To associate the level of stress, anxiety and depression in infertile women with their selected demographic variables.

## **Operational Definitions**

### **❖ Effectiveness**

Refers to the significant reduction in the level of stress, anxiety and depression as determined by the differences between the pre-test and the post-test scores.

### **❖ Progressive Muscle Relaxation Technique**

It involves contracting each body part and its muscle groups for 5 to 10 seconds and releasing tension of each body part.

### **❖ Stress**

Refers to the psychological status in response to stressors such as age, diagnosed as infertile, period of infertility, procedural stress and uncertainty about treatment outcome.

### **❖ Anxiety**

Refers to a psychological symptom in response to the stress. It is the uneasy, uncomfortable feeling aroused by a threat or danger and is accompanied by physical symptoms.



#### ❖ **Depression**

A psychological symptom associated with low mood or loss of interest, loss of appetite, loss of memory and loss of sleep that prevents a person from leading a normal life.

#### ❖ **Infertile women**

Refers to those married women who have not conceived even after one year of unprotected sexual intercourse.

#### **Assumptions**

- Level of stress, anxiety and depression varies from individual to individual.
- Stress, anxiety and depression can lead to some irreversible complications, if uncared.
- The Progressive Muscle Relaxation Technique may reduce the stress, anxiety and depression in infertile women.

#### **Hypotheses**

**H<sub>1</sub>:** There will be significant reduction in the level of stress, anxiety and depression in infertile women after Progressive Muscle Relaxation Technique at  $p \leq 0.05$  level.

**H<sub>2</sub>:** There will be significant association in the level of stress, anxiety and depression in infertile women with their selected demographic variables at  $p \leq 0.05$  level.

#### **Delimitations**

- The study is limited to selected hospital.
- The sample size is limited to only 40.
- The study period is limited to only 4 weeks.

## **Projected Outcome**

- The study will enable to identify the level of stress, anxiety and depression in infertile women.
- The study will provide an opportunity to nurses to teach the Progressive Muscle Relaxation Technique to infertile women.
- At the end of the study the infertile women will be able to understand and develop the practice of Progressive Muscle Relaxation Technique to reduce their stress, anxiety and depression.
- The findings of the study will help to assess the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women.

## **Conceptual Framework**

A conceptual framework can be defined as a set of concepts and assumptions that integrate into a meaningful configuration (Fawcett, 1994). The conceptual framework facilitates communication and provides a systematic approach to nursing research, educational status, administration and practice. Conceptual models attempt to represent reality with a minimal use of words.

The conceptual framework selected for this study is Wiedenbach's Helping Art of Clinical Nursing Theory (1964). This theory has three factors.

1. Central purpose
2. Prescription
3. Reality

### **i. Central purpose:**

It refers to what the nurse want to accomplish. It is an overall goal towards which a nurse strives.

## **ii. Prescription:**

It refers to plan of care for a patient. It will specify the nature of action that will fulfill the nurse's central purpose.

## **iii. Reality:**

It refers to the physical, psychological, emotional and spiritual factors that come into play in situations.

The five realities identified by Wiedenbach's are agent, recipient, goal, means and framework.

The conceptualization of nursing practice according to this theory consists of three steps as follows,

Step-I: Identifying the need for help.

Step-II: Ministering the needed help.

Step-III: Validating that the need for help was not met.

### **Step-I: Identifying the need for help**

The investigator identified the infertile women who need appropriate measure to reduce Stress, Anxiety and Depression.

### **Step-II: Ministering the needed help**

After identifying the need provide the intervention.

**Agent:** Investigator.

**Recipient:** Infertile women

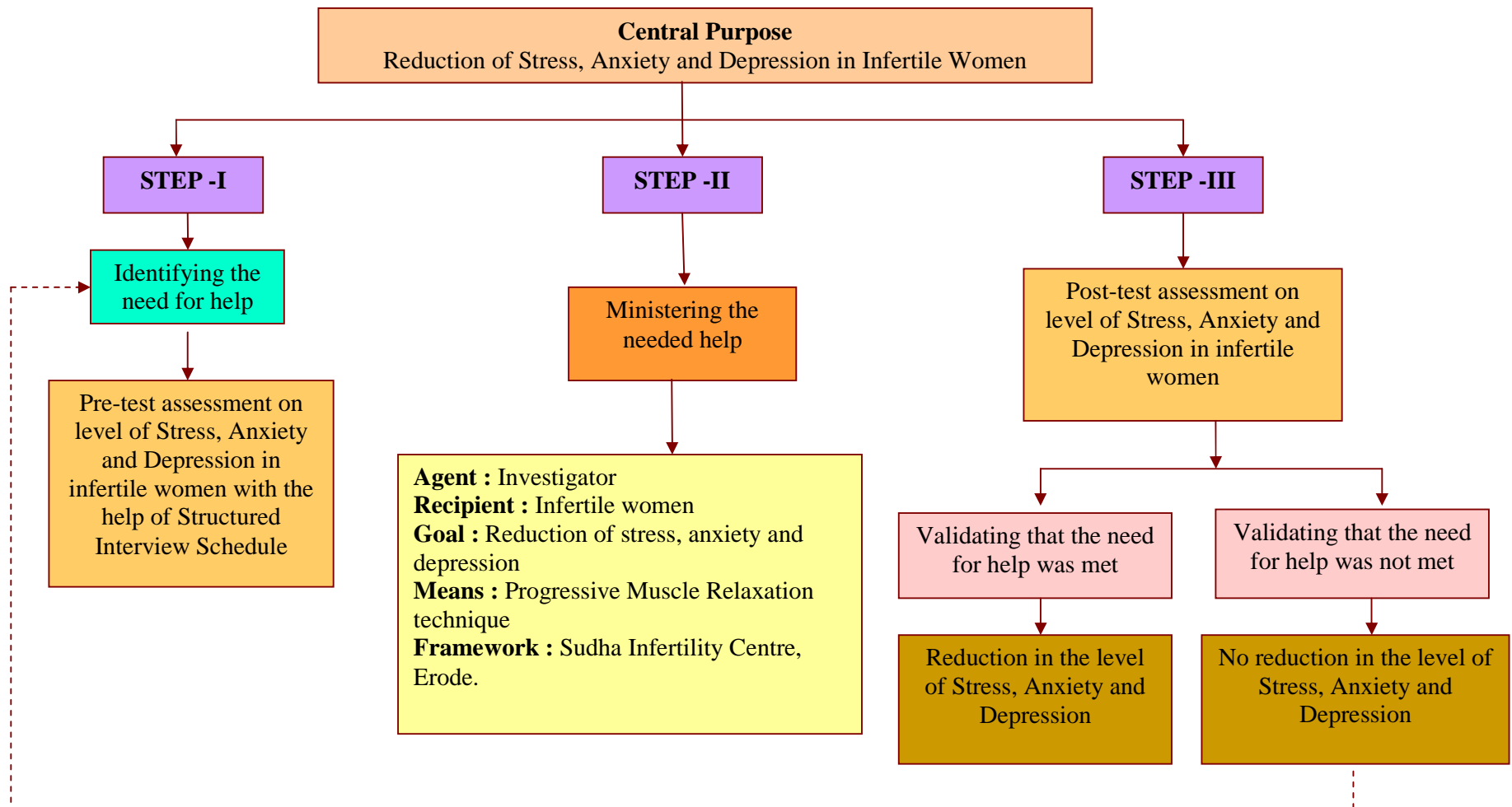
**Goal:** Reduction of stress, anxiety and depression

**Means :** Progressive Muscle Relaxation technique

**Framework:** Sudha Infertility Center, Erode.

### **Step-III: Validating that the need for help was met**

It is accomplished by means of pre-test & post-test assessment on level of stress, anxiety and depression in infertile women after rendering intervention.



**Figure 1-1: CONCEPTUAL FRAMEWORK BASED ON WIEDENBACH'S HELPING ART OF CLINICAL NURSING THEORY ON EFFECTIVENESS OF PMRT IN INFERTILE WOMEN**

## **Summary**

In this chapter the investigator has discussed the background of the study, need for the study, statement of the problem, objectives, operational definitions, assumptions, hypothesis, delimitations, projected outcome and conceptual framework.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

Literature review begins with locating as many relevant materials as possible and ends with writing a summary of the available knowledge

**(Judith, 1980)**

Literature review of the present study is organized under the following headings.

- Literature related to stress, anxiety and depression in infertile women.
- Literature related to Effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression.

#### **Literature Related to Stress, Anxiety and Depression in Infertile Women**

**Chiba et. al., (2007)** studied the psychology of some infertile women who were on treatment with a battery of psychological tests, consisting of a semi-structured interview by State Trait Personality Inventory. They found that the stress factor for infertile women changed with the length of infertility treatment. Infertile women were found to become more depressed as the treatment persisted longer. They recommended counseling and relaxation for infertile women undergoing infertility treatment.

**Sandelowki et. al., (2005)** revealed that severe psycho-emotional distress like depression, low self-esteem, low level marital and sexual satisfaction are experienced by infertile women.

**Salakos, Roupa & Sateroponlon (2001); Newton, Hearn & Yuspe (2000) and Brighent E.R (1999)** conducted a study to assess the emotional status of infertile women entering an IVF programme. This study revealed that emotional factors were influenced by the number of IVF cycles and personality dimension and infertile

women showed significant increase in anxiety and depressive symptoms after a failed cycle.

**Lena, Agentia & Aila (1999); Ellen Andrea et. al.,(1998) and Hsu L & Kuo (2001)** conducted a study to identify the gender role distress in response to infertility. They assert that infertile women reacted more strongly than their partner. Infertile women experienced higher intensity of depression, helplessness and marital strain than men.

#### **Literature Related to Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression**

**Chen W C et. al.,(2009)** conducted a study on determining the efficacy of progressive muscle relaxation training in reducing anxiety among 18 acute schizophrenic patients in Taiwan. The design used was experimental randomized controlled trial using repeated measures. He concluded that Progressive Muscle Relaxation Technique could effectively alleviate anxiety in patients with schizophrenia.

**Dehdari T et. al.,(2009)** conducted a study on evaluating the effect of Progressive Muscle Relaxation Technique on quality of life in anxious patients after coronary artery bypass graft. The method used was an open uncontrolled trial with a sample size of 110 (55 for experimental group and 55 for control group). In his study he concluded that Progressive Muscle Relaxation Technique was an effective therapy for improving psychological health and quality of life in anxious heart patients.

**Singh V P et. al.,(2009)** compared the effectiveness of Music and Progressive Muscle Relaxation Technique for anxiety in COPD among 72 samples. Pre test-post test design was used here. He concluded that music and Progressive Muscle

Relaxation Technique were effective in reducing anxiety and dyspnoea in COPD patients hospitalized with exacerbation.

**Lolak S et. al.,(2008)** conducted a study on the effects of Progressive Muscle Relaxation Training on anxiety and depression in patients enrolled in an outpatient pulmonary rehabilitation program. The method used was prospective randomized control trial. 83 subjects were randomly assigned to a standard care or intervention group. The standard care included 2 days per week of exercise, education and psychosocial support delivered by a multidisciplinary team and the intervention team received additional sessions of PMRT using a pre-recorded tape for 25 min/week during weeks 2-8. He concluded that PR is effective in reducing anxiety and depressive level in chronic lung patients.

**Vaughen N et. al.,(2007)** conducted a study among clerical workers. He concluded that the Progressive Muscle Relaxation Technique is an effective intervention to reduce stress. He recommended that it is the nurse's responsibility to identify the stressor and implement measures to strengthen the lines of defense.

**Yildirim Y K et. al.,(2006)** conducted a study to determine the effect of Progressive Muscle Relaxation Training on anxiety levels and quality of life in dialysis patients. The sample number was 46. In this study they concluded that PMRT for dialysis patients helped to decrease state and trait anxiety levels and had a positive impact on quality of life.

**Patricia De Berry (2006) & Good M.A (2005)** conducted a study to assess the efficacy of PMR in reducing stress related symptoms in geriatric population. The results revealed that the experimental group showed significant improvement in the state anxiety, muscle tension and sleeping hours.



**Khasky A.D & J.C.Smith (2005)** did a study on stress and anxiety. 114 participants in 4 groups practiced 25 minutes of progressive relaxation training, yoga and a control task. Before and after training participants were tested by Smith Quick Stress Test. In the post test PMRT had an effect on the somatic stress than the other technique and helped the individual to cope with stress and anxiety.

**Synder (2004)** conducted a study on PMRT, which is an intervention used by the nurses for reducing stress. In nursing practice this technique is used on a scientific basis with poor modification. PMRT reduces stress in the elderly and is used to foster adaptation to the society.

**De Berry S (2004)** did a study on PMRT to 10 highly anxious women of age group between 69 & 84. The group received two weeks of baseline training of relaxation technique and ten weeks of home practice using taped instructions. At the end of training, participants had significant improvement in hours to fall asleep, number of nocturnal awakenings, headaches and self-reported muscle tension.

**Weber S (2003)** conducted a study on the effects of relaxation exercises on anxiety levels in psychiatric inpatients. 39 subjects were selected by convenience sampling technique. The pre-test and post-test anxiety levels were measured by State-Trait Anxiety Inventory. A significant reduction in anxiety level was obtained on post test.

**Shu- Hsin (2003)** investigated the relative efficacy of PMRT among infertile women attending different stages of an IVF. Results revealed that infertile women perceived a positive effect in relieving their psychological responses.

**Forbes E.J & Pekala (2003)** conducted a study to assess the psycho physiological stress reducing properties of PMRT with hypnosis and deep abdominal breathing on 231 nursing students for a period of one week. After this session, the

students trained with PMRT and hypnosis had increased skin temperature, reduced pulse rate and reduced psycho-physiological responsiveness. Students who had deep abdominal breathing showed significant reduction in skin temperature and no effect on the psycho physiological responses.

**Scogin F. Rechard (2002)** stated that elders exposed to PMRT experienced significant relaxation effects and showed improvement in personal functioning. The symptom checklist-90 was used to measure self-reported personal adjustment and it showed significant positive changes followed by relaxation training and also reduction in muscle tension.

**Wilk C (2001)** conducted a pilot study to identify the effects of PMRT among cardiac rehabilitation patients. They used Spielberger State- Trait Anxiety Inventory to collect the data. They concluded that PMRT was effective in reducing anxiety.

**Shapino S.Lehrer (2000)** did a study on psycho-physiological effects of PMRT. 21 subjects were selected and given relaxation training for five sessions. This technique had some effects on self perception of heaviness and warmth in the limbs, reduction of anxiety, depression and a number of other symptoms.

## **CHAPTER - III**

### **METHODOLOGY**

The methodology of research indicates the general pattern of organizing the procedure for gathering valid and reliable data for the purpose of investigation (Polit, D.F., and Hungler, 2003).

This chapter consists of research approach, research design, population, description of the setting, sampling, variables, description of the tool, validity and reliability, pilot study, method of data collection and plan for data analysis.

The present study aims to determine the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women at a selected hospital, Erode.

#### **Research Approach**

Quantitative evaluative approach was adopted for the study.

#### **Research Design**

Pre experimental design (one group pre-test - post-test) was adopted for this study to determine the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women.

#### **O<sub>1</sub> X O<sub>2</sub>**

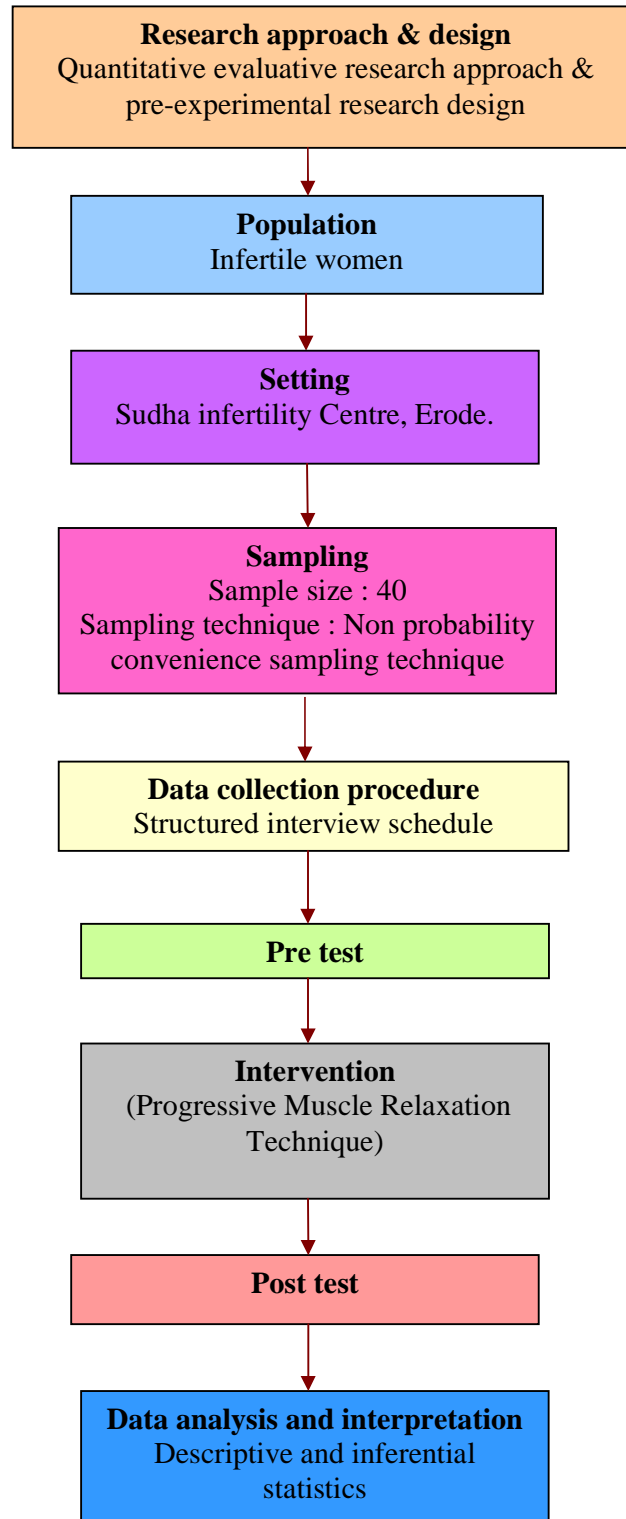
**O<sub>1</sub>** : Pre-test (Level of stress, anxiety and depression before the intervention)

**X** : Intervention (Progressive Muscle Relaxation Technique)

**O<sub>2</sub>** : Post-test (Level of stress, anxiety and depression after the intervention)

#### **Population**

The population of the study included all the infertile women.



**Figure : 3.1 Schematic representation of the research methodology.**

## **Description of the Setting**

Setting is the general location and condition in which data collection takes place for the study (**Polit, D.F., and Hungler, 2003**).

The study was conducted at Sudha Infertility Center, Erode. It is located about 10 km away from Erode Bus Stand. The investigator selected this setting for the availability of samples and for the feasibility of the study.

## **Sampling**

### **➤ Sample**

Infertile women attending Sudha Infertility Center, Erode and those who fulfilling the criteria for sample selection.

### **➤ Sample size**

The investigator selected 40 infertile women.

### **➤ Sampling technique**

Non probability convenience sampling technique was used for selecting the sample for the study.

### **➤ Criteria for sample selection**

The sample selection was based on the following inclusion and exclusion criteria.

#### **Inclusion criteria**

- Those who co-operate during the study.
- Those who can understand Tamil or English.
- Infertile women who have normal cognitive function.

#### **Exclusion criteria**

- Women who were previously exposed to Progressive Muscle Relaxation Technique or any other relaxation technique.

- Women with medical complications.
- Women aged above 45 years.

### **Variables**

Independent variable: Progressive Muscle Relaxation Technique

Dependent variable: Stress, Anxiety and Depression

### **Description of the Tool**

The tool comprised 4 sections.

#### **Section- A: Demographic profile**

The demographic profile comprised 15 items such as age, religion, education, occupation, family income per capita, type of family, age at puberty, regularity of menstruation, age at marriage, type of marriage, duration of marital life, use of contraceptives, previous history of abortion, type of infertility and family history of infertility.

#### **Section- B: Structured interview schedule to assess the level of stress**

It comprised 29 items under seven headings such as hopelessness, low self esteem, sexual problems, strained interpersonal relationship, inadequate social support, financial problems and attending social function.

#### **Scoring procedure for assessing level of stress**

Each item had a score between 0-3 depending on the level of stress. The minimum and maximum scores were 0 and 87 respectively.

The score was classified as both positive and negative aspects.

For positive items (1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 16, 18, 19, 23, 24, 26, 27)

Never	-0
Occasionally	-1
Often	-2
Always	-3

For negative items (9, 13, 14, 15, 17, 20, 21, 22, 25, 28)

Never -3  
Occasionally -2  
Often -1  
Always -0

**Table 3.1 Scoring procedure for stress**

Level of stress	Score
No stress	0-21
Mild stress	22-43
Moderate stress	44-65
Severe stress	66-87

**Section-C: Structured interview schedule to assess the level of anxiety**

This section dealt with Hamilton Anxiety Rating Scale to assess the level of anxiety. It comprised 14 items. Each item had a score between 0-4 depending on the level of anxiety and that could be interpreted as not present, mild, moderate, severe and very severe. The minimum and maximum scores were 0 and 30 respectively. The score interpretation was done as follows:

**Table 3.2 Scoring procedure for anxiety**

Level of anxiety	Score
Mild anxiety	< 17
Moderate anxiety	18-24
Severe anxiety	25-30

**Section-D: Structured interview schedule to assess the level of depression**

This section dealt with Beck's Depression Inventory to assess the level of depression. This section comprised 21 items. Each item had a score between 0-3

depending on the level of depression. The minimum and maximum scores were 0 and 63 respectively. The score interpretation was done as follows:

**Table 3.3 Scoring procedure for depression**

Level of depression	Score
Minimal depression	0-13
Mild depression	14-19
Moderate depression	20-28
Severe depression	29-63

### **Validity and Reliability**

Validity of the stress assessment tool was established in consultation with eight experts from different fields like Psychiatric Nursing and Medicine. The tool was found adequate and it was translated into Tamil.

Reliability was checked for the stress assessment tool by Split Half Method and the obtained  $r^1$  value (0.9) indicated that the tool was reliable. Reliability for the anxiety and depression assessment scales was not checked as these were standard inventory scales.

### **Pilot Study**

The pilot study was conducted from 07.06.2010 to 12.06.2010 in Sri Gokulam Hospital, Salem. Four infertile women were selected for pilot study through non probability convenience sampling technique. The samples chosen were similar in characteristics to those of the population under study. The pre-test was conducted on 07.06.2010 and the samples were trained with the Progressive Muscle Relaxation Technique in a calm and quite environment. The samples were instructed to do the technique regularly and they were provided with a handout regarding steps of PMRT



and a record sheet. Return demonstration was conducted on the next day and the post test on 12.06.2010. The data analysis was done with descriptive statistics. The tool was found feasible and practicable.

### **Method of Data Collection**

#### **➤ Ethical consideration**

Prior to collection of data written permission was obtained from the Managing Director of Sudha Infertility Center, Erode.

Informed consent was obtained from infertility women.

#### **➤ Period of data collection**

The data collection was done for a period of 4 weeks from 05-07-2010 to 31-7-2010.

#### **➤ Data collection procedure**

The pre-test was conducted from 05.07.2010 to 13.07.2010. Each day the investigator took 5 samples. Structured interview schedule was used to assess the level of stress, anxiety and depression of the samples. The time taken by the investigator to complete the tool for each sample was 30 to 45 minutes. The samples were asked to choose the correct response from the given options. After the pre-test the samples were trained with the Progressive Muscle Relaxation Technique in a calm and quite environment. The duration of the procedure was 45 minutes to 1 hour. During the procedure the samples were requested to tighten and loosen their muscles one by one from head to foot. The samples were instructed to do the technique daily. The samples were provided with handout and a daily record sheet which included the date and time of PMRT, reason if PMRT was not done and signature of the sample. The return demonstration was conducted on the next day. Frequent contacts were

made with the samples through phone calls and visits. The post-test was done after 18 days of intervention. The data were edited for completion.

### **Plan for Data Analysis**

The collected data will be tabulated for its completion. Descriptive statistics like frequency, percentage, mean and standard deviation will be used for categorical data and paired 't' test will be used to find out the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression. Chi-Square test will be used to associate the level of stress, anxiety and depression with the selected demographic variables.

### **Summary**

This chapter dealt with methodology and it consisted of research approach, research design, population, description of the setting, variables, sampling, description of the tool, validity and reliability, pilot study, method of data collection procedure and plan for data analysis. The data analysis and interpretation of the study are presented in the following chapter.

## **CHAPTER – IV**

### **DATA ANALYSIS AND INTERPRETATION**

This chapter comprises data analysis and interpretation for different variables and objectives stated for the study. The data collected were interpreted by using tables and figures.

The data collected were organized as per the following sections,

**Section - A:** Distribution of Samples according to their Demographic Variables.

**Section - B:** \* Distribution of Samples according to their Level of Stress, Anxiety and Depression before intervention.

\* Distribution of Samples according to their Level of Stress, Anxiety and Depression after intervention.

**Section - C:** \* Comparison of Level of Stress, Anxiety and Depression in Infertile Women before and after Intervention.

➤ Distribution of samples according to their level of stress before and after intervention.

➤ Distribution of samples according to their level of anxiety before and after intervention.

➤ Distribution of samples according to their level of depression before and after intervention.

\* Comparison of Mean, Standard Deviation and Mean Percentage of Level of Stress, Anxiety and Depression in Infertile Women.

**Section - D:** Hypotheses Testing

- Effectiveness of progressive muscle relaxation technique on stress, anxiety and depression in infertile women.
- Association in the level of stress, anxiety and depression with the selected demographic variables.

## Section - A

### Distribution of Samples according to their Demographic Variables

**Table-4. 1**

**Frequency and percentage distribution of samples according to their socio-demographic variables**

<b>S. No</b>	<b>Socio-demographic Variables</b>		<b>F</b>	<b>%</b>
<b>1</b>	<b>Age in years</b>	a. 20-25	7	17.5
		b. 26-30	6	15
		c. 31-35	11	27.5
		d. 36-40	12	30
		e. 41-45	4	10
<b>2</b>	<b>Religion</b>	a. Hindu	40	100
		b. Christian	-	-
		c. Muslim	-	-
		d. Others	-	-
<b>3</b>	<b>Education</b>	a. No formal education	-	-
		b. Primary school	6	15
		c. High school	6	15
		d. Higher secondary school	11	27.5
		e. Under Graduate	12	30
		f. Post Graduate	5	12.5
<b>4</b>	<b>Occupation</b>	a. Home maker	15	37.5
		b. Business	13	32.5
		c. Private employee	7	17.5
		d. Government employee	5	12.5
<b>5</b>	<b>Family income per capita</b>	a. Below Rs. 2000	9	22.5
		b. Rs. 2001-5000	9	22.5
		c. Rs. 5001-10000	14	35
		d. Above Rs. 10000	8	20
<b>6</b>	<b>Type of family</b>	a. Nuclear family	32	80
		b. Joint family	8	20
		c. Extended family	-	-

Table-4.1 shows that 12 (30%) samples belonged to the age group of 36 - 40 years, all the 40 (100%) samples were Hindus, 12 (30%) were under graduates, 15 (37.5%) samples were homemakers, 14 (35%) samples had a per capita family income of Rs. 5001 – 10000 and majority of the samples, 32 (80%) belonged to nuclear family.

**Table-4. 2**

**Frequency and percentage distribution of samples according to their personal variables**

**n=40**

<b>S. No</b>	<b>Personal Variables</b>		<b>f</b>	<b>%</b>
<b>1</b>	<b>Age at puberty</b>	a. Below 12 years	6	15
		b. 12-14 years	25	62.5
		c. Above 14 years	9	22.5
<b>2</b>	<b>Regularity of menstruation</b>	a. Regular	35	87.5
		b. Irregular	5	12.5
<b>3</b>	<b>Age at marriage</b>	a. Below 20 years	5	12.5
		b. 21-25 years	28	70
		c. 26-30 year	5	12.5
		d. Above 30 years	2	5
<b>4</b>	<b>Type of marriage</b>	a. Consanguinous	9	22.5
		b. Non consanguinous	31	77.5
<b>5</b>	<b>Duration of marital life</b>	a. Below 5 years	12	30
		b. 6-10 years	7	17.5
		c. 11-15 years	14	35
		d. 16-20 years	4	10
		e. Above 20 years	3	7.5
<b>6</b>	<b>Use of contraceptives within one year after marriage</b>	a. Yes	-	-
		b. No	40	100

Table-4.2 shows that 25 (62.5%) samples attained puberty at the age between 12 – 14 years, 35 (87.5%) samples had regular menstruation, 28 (70%) got married at the age between 21 - 25 years and 31 (77.5%) samples were non consanguineously married. 14 (35%) samples had a marital life of 11 – 15 years and none of the 40 (100%) samples used any contraceptives within one year after marriage.

**Table-4. 3**

**Frequency and percentage distribution of samples according to their infertility related variables**

**n=40**

<b>S. No</b>	<b>Infertility related Variables</b>		<b>f</b>	<b>%</b>
<b>1</b>	<b>Previous history of abortion</b>	a. Nil	34	85
		b. Once	3	7.5
		c. Twice	2	5
		d. More than two times	1	2.5
<b>2</b>	<b>Type of infertility</b>	a. Primary	33	82.5
		b. Secondary	7	17.5
<b>3</b>	<b>History of infertility in the family</b>	a. Yes	9	22.5
		b. No	31	77.5

Table-4.3 shows that 34 (85%) samples had no previous history of abortion, 33 (82.5%) samples had primary infertility and 31 (77.5%) samples had no family history of infertility.



## Section – B

### Distribution of Samples according to their Level of Stress, Anxiety and Depression before and after Intervention

**Table-4.4**

**Frequency and percentage distribution of samples according to their level of stress, anxiety and depression before intervention**

**n=40**

S.No	Variables	Levels	f	%
<b>1</b>	<b>Stress</b>	No stress	16	40
		Mild	24	60
		Moderate	-	-
		Severe	-	-
<b>2</b>	<b>Anxiety</b>	Mild	29	72.5
		Moderate	9	22.5
		Severe	2	5
<b>3</b>	<b>Depression</b>	Minimal	21	52.5
		Mild	11	27.5
		Moderate	4	10
		Severe	4	10

Table - 4.4 reveals that, in pre-test, 16 (40%) samples had no stress, 24 (60%) samples had mild stress and no one had moderate or severe stress. 29 (72.5%) samples had mild anxiety, 9 (22.5%) had moderate anxiety and 2 (5%) had severe anxiety. 21 (52.5%) samples had minimal depression, 11 (27.5%) had mild depression, 4 (10%) had moderate depression and 4 (10%) had severe depression.

**Table-4.5**

**Frequency and percentage distribution of samples according to their level of stress, anxiety and depression after intervention**

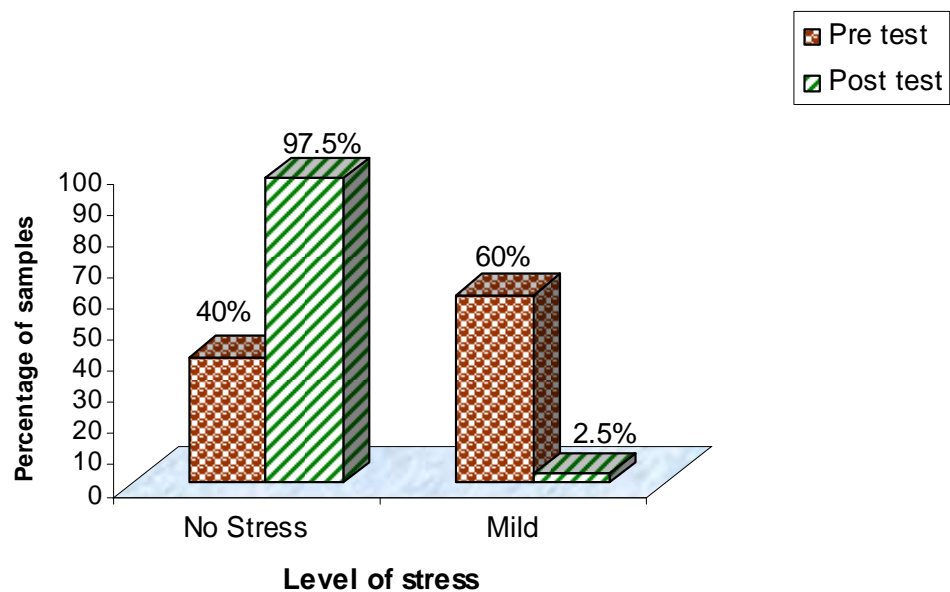
**n=40**

<b>S.No</b>	<b>Variables</b>	<b>Levels</b>	<b>f</b>	<b>%</b>
<b>1</b>	<b>Stress</b>	No stress	39	97.5
		Mild	1	2.5
		Moderate	-	-
		Severe	-	-
<b>2</b>	<b>Anxiety</b>	Mild	33	82.5
		Moderate	7	17.5
		Severe	-	-
<b>3</b>	<b>Depression</b>	Minimal	31	77.5
		Mild	4	10
		Moderate	5	12.5
		Severe	-	-

Table - 4.5 reveals that, in post-test, 39 (97.5%) samples had no stress and only 1 (2.5%) sample had mild stress. None of them had moderate or severe stress. 33 (82.5%) samples had mild anxiety, 7 (17.5%) of them had moderate anxiety and no one had severe anxiety. 31 (77.5%) samples had minimal depression, 4 (10%) had mild depression and 5(12.5%) had moderate depression. None of them had severe depression in post-test.

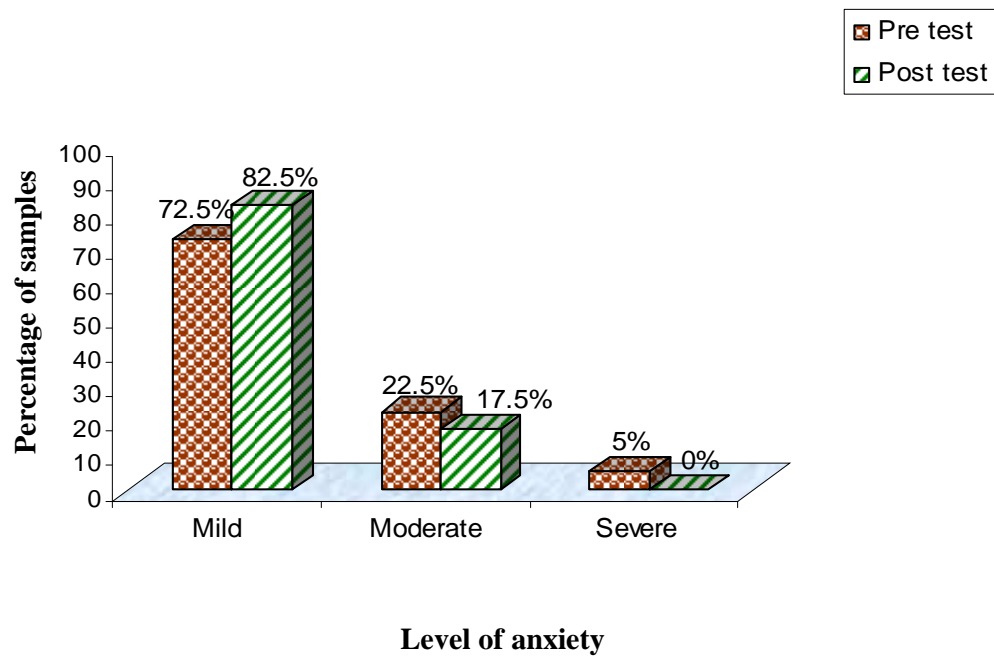
### Section - C

#### Comparison of Level of Stress, Anxiety and Depression in Infertile Women before and after Intervention.



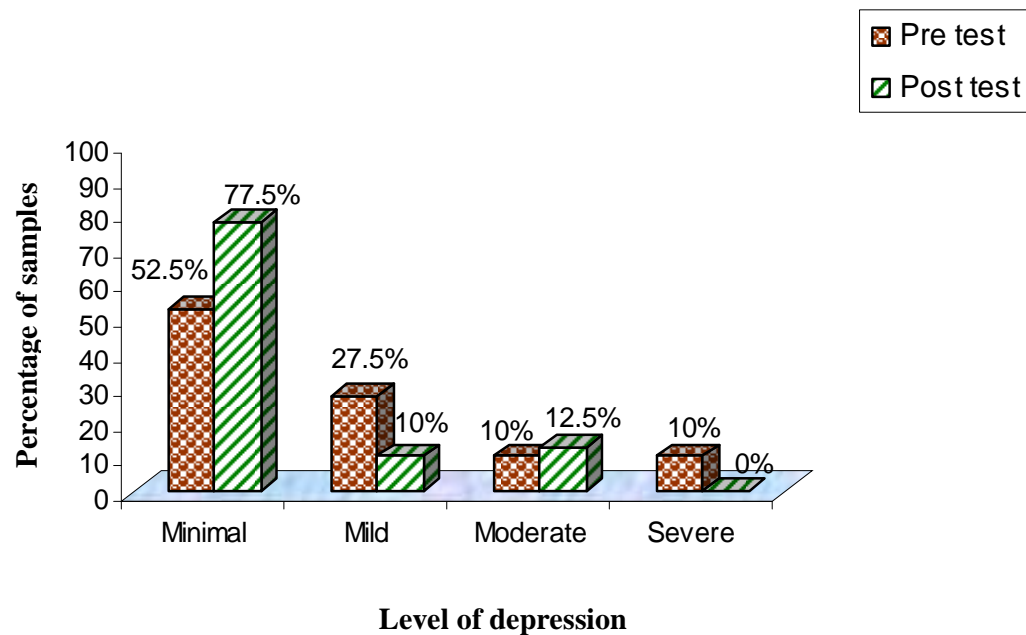
**Figure-4.1: Distribution of samples according to their level of stress before and after intervention**

Figure-4.1 reveals that, in pre-test, 16 (40%) samples had no stress and 24 (60%) samples had mild stress. In post-test, 39 (97.5%) samples had no stress and only 1 (2.5%) had mild stress. No one had moderate or severe stress either in pre-test or post-test.



**Figure-4.2: Distribution of samples according to their level of anxiety before and after intervention**

Figure-4.2 shows that, in pretest, 29 (72.5%) samples had mild anxiety, 9 (22.5%) had moderate anxiety and 2 (5%) had severe anxiety and in post-test, 33 (82.5%) samples had mild anxiety and 7 (17.5%) had moderate anxiety and none of them had severe anxiety.



**Figure-4.3: Distribution of samples according to their level of depression before and after intervention**

Figure-4.3 reveals that, in pre-test, 21 (52.5%) samples had minimal depression, 11 (27.5%) had mild depression, 4 (10%) had moderate depression and 4 (10%) had severe depression. In post-test, 31 (77.5%) samples had minimal depression, 4 (10%) had mild depression and 5 (12.5%) had moderate depression and none of them had severe depression.

**Comparison of Mean, Standard Deviation and Mean Percentage of Level of  
Stress, Anxiety and Depression in Infertile Women**

**Table-4.6**

**Mean, standard deviation and mean percentage of level of stress, anxiety and  
depression in infertile women**

**n=40**

S. No	Variables	Maximum Possible Score	Pre-test			Post-test			Difference in mean %
			Mean	SD	Mean %	Mean	SD	Mean %	
1	Stress	87	24.08	8.04	27.68	10.83	4.98	12.45	15.23
2	Anxiety	30	12.45	7.24	41.5	9.28	5.67	30.93	10.57
3	Depression	63	14.1	7.74	22.38	10.03	6.42	15.92	6.46

Table-4.6 reveals that, the pre-test mean stress score was 24.08 ( $\pm 8.04$ ), the anxiety score was 12.45 ( $\pm 7.24$ ) and the depression score was 14.1( $\pm 7.74$ ). The post-test mean stress score was 10.83 ( $\pm 4.98$ ), anxiety score was 9.28 ( $\pm 5.67$ ) and depression score was 10.03 ( $\pm 6.42$ ). The difference in mean percentage for stress, anxiety and depression were 15.23, 10.57 and 6.46 respectively revealing that Progressive Muscle Relaxation Technique was more effective in reducing the level of stress.

## Section – D

### Hypotheses Testing

**Table-4.7**

**Effectiveness of progressive muscle relaxation technique on stress, anxiety and depression in infertile women**

**n=40**

S. No	Variables	Maximum Possible Score	Pre-test		Post-test		't' value	Table value
			Mean	SD	Mean	SD		
1	Stress	87	24.08	8.04	10.83	4.98	17.20**	3.29
2	Anxiety	30	12.45	7.24	9.28	5.67	8.78**	
3	Depression	63	14.1	7.74	10.03	6.42	9.87**	

**\*\*Highly Significant at  $p < 0.001$  level; df-38**

The pre-test mean stress score was 24.08 ( $\pm 8.04$ ), the anxiety score was 12.45 ( $\pm 7.24$ ) and the depression score was 14.1 ( $\pm 7.74$ ). The post-test mean stress score was 10.83 ( $\pm 4.98$ ), anxiety score was 9.28 ( $\pm 5.67$ ) and depression score was 10.03 ( $\pm 6.42$ ). The paired 't' value at  $p < 0.001$  level for stress, anxiety and depression were 17.20, 8.78, 9.87 respectively which shows that the Progressive Muscle Relaxation Technique was effective in reducing the stress, anxiety and depression in infertile women. Hence the research hypothesis ( $H_1$ ) is retained.

**Table-4.8****Association in the level of stress, anxiety and depression with the selected demographic variables****n=40**

S.No	Demographic Variables	Stress			Anxiety			Depression		
		df	$\chi^2$	Table Value	df	$\chi^2$	Table Value	df	$\chi^2$	Table Value
1	Age in years	4	3.65	9.49	8	9.97	15.5	12	23.43*	21
2	Education	4	6.68	9.49	10	12.23	18.3	12	12.43	21
3	Occupation	3	0.673	7.81	8	12.02	15.5	9	11.51	16.9
4	Family income per capita	3	36.64*	7.81	6	8.77	12.8	9	20.72*	16.9
5	Type of family	1	0.935	3.82	2	1.26	5.99	3	2.55	7.81
6	Age at puberty	2	1.6	5.99	4	9.58*	9.49	6	10.68	122.8
7	Regularity of menstruation	1	0.95	3.82	2	1.18	5.99	3	1.31	7.81
8	Age at marriage	3	7.64	7.81	6	6.99	12.8	9	22.23*	16.9
9	Type of marriage	1	0.22	3.82	2	1.22	5.99	3	1.73	7.81
10	Duration of marital life	4	4.34	9.49	8	12.34	15.5	12	40.64*	21
11	Previous history of abortion	3	4.7	7.81	6	15.28*	12.8	9	45.52*	16.9
12	Type of infertility	1	5.66*	3.82	2	4.03	5.99	3	26.78*	7.81
13	History of infertility in the family	1	0.22	3.82	2	0.91	5.99	3	0.161	7.81

\* Significant at  $p < 0.05$  level



There is significant association in the level of stress with the selected demographic variables like family income per capita and type of infertility at  $p < 0.05$  level. There is no association in the level of stress with the other variables. Thus  $H_2$  is retained for family income per capita and type of infertility.

There is significant association in the level of anxiety with the selected demographic variables like age at puberty and previous history of abortion at  $p < 0.05$  level. There is no association in the level of anxiety with the other variables. Thus  $H_2$  is retained for age at puberty and previous history of abortion.

There is significant association in the level of depression with the selected demographic variables like age, family income per capita, age at marriage, duration of marital life, previous history of abortion and type of infertility at  $p < 0.05$  level. There is no association in the level of depression with the other variables. Thus  $H_2$  is retained for age, family income per capita, age at marriage, duration of marital life, previous history of abortion and type of infertility.

## **Summary**

This chapter dealt with data interpretation in the form of statistical values based on the objectives. Frequency and percentage distribution was found out on level on stress, anxiety and depression in infertile women with their selected demographic variables. The paired 't' test was used to determine the effectiveness of progressive muscle relaxation technique on stress, anxiety and depression. The chi-square analysis was used to find out the association in the level of stress, anxiety and depression with their selected demographic variables.

## **CHAPTER – V**

### **DISCUSSION**

This pre-experimental study was done to determine the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women in a selected hospital in Erode.

#### **Distribution of Samples according to their Demographic Variables**

12 (30%) samples belonged to the age group of 36 - 40 years, all the 40 (100%) samples were Hindus, 12 (30%) were undergraduates, 15 (37.5%) samples were home makers and 14 (35%) samples had a per capita family income of Rs. 5001 – 10000. Majority of the samples, 32 (80%) belonged to nuclear family, 25 (62.5%) of them attained puberty at the age between 12 – 14 years, 35 (87.5%) samples had regular menstruation, 28 (70%) got married at an age between 21 - 25 years and 31 (77.5%) samples were non- consanguinously married. 14 (35%) samples had a marital life of 11 – 15 years and all the 40 (100%) samples did not use any contraceptives within one year after marriage. 34 (85%) samples had no previous history of abortion, 33 (82.5%) samples had primary infertility and 31 (77.5%) samples had no family history of infertility.

#### **The First Objective of the Study was to assess the Level of Stress, Anxiety and Depression in Infertile Women.**

In pre-test, among 40 samples, 16 (40%) had no stress and 24 (60%) had mild stress. None of them had moderate or severe stress.

In pre-test, 29 (72.5%) samples had mild anxiety, 9 (22.5%) had moderate anxiety and 2 (5%) had severe anxiety.

In pre-test, 21 (52.5%) samples had minimal depression, 11 (27.5%) had mild depression and 4 (10%) had moderate depression and 4 (10%) had severe depression.

**Volgsten H. et. al. (2008)** conducted a study to determine the prevalence of psychiatric disorders in infertile women and men undergoing in vitro fertilization treatment. He concluded that 10.9% of females had major depression and 14.8% of females had any anxiety disorder. In this study, 10% of samples had severe depression and 10% had moderate depression. So it indicates that depression is common in infertile women.

**The Second Objective of the Study was to determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women.**

The pre-test mean stress score was 24.08 ( $\pm 8.04$ ), the anxiety score was 12.45 ( $\pm 7.24$ ) and the depression score was 14.1 ( $\pm 7.74$ ). The post-test mean stress score was 10.83 ( $\pm 4.98$ ), anxiety score was 9.28 ( $\pm 5.67$ ) and depression score was 10.03 ( $\pm 6.42$ ). The paired 't' value at  $p < 0.001$  level for stress, anxiety and depression were 17.20, 8.78, 9.87 respectively which shows that the Progressive Muscle Relaxation Technique was effective in reducing the stress, anxiety and depression in infertile women.

**Webb Symth & Yanandi (2000)** conducted a study among infertile women to test the effectiveness of PMRT in reducing stress related symptoms. They concluded that the experimental group of infertile women who underwent PMRT had a significantly lower mean physiological strain score and interpersonal strain score and also had significant reduction in psychological strain score. In this study, the pre-test mean score on stress was 24.08 ( $\pm 8.04$ ) and the post-test mean score was 10.83 ( $\pm 4.98$ ). The difference in mean percentage was 15.23 which indicate that the PMRT was effective in reducing stress in infertile women.

### **The Third Objective of the Study was to Associate the Level of Stress, Anxiety and Depression in Infertile Women with their selected Demographic Variables**

There is significant association in the level of stress with the selected demographic variables like family income per capita and type of infertility at  $p < 0.05$  level. There is no association in the level of stress with the other variables.

There is significant association in the level of anxiety with the selected demographic variables like age at puberty and previous history of abortion at  $p < 0.05$  level. There is no association in the level of anxiety with the other variables.

There is significant association in the level of depression with the selected demographic variables like age, family income per capita, age at marriage, duration of marital life, previous history of abortion and type of infertility at  $p < 0.05$  level. There is no association in the level of depression with the other variables.

**Sherina et. al.(2008)** conducted a study in Malaysia, reported that there is a significant association between the depressive symptoms and history of having a miscarriage within last 6 months and difficulty in getting pregnant.

### **Summary**

This chapter dealt with the discussion of the study with reference to the objective and supportive studies. All the **three objectives** have been obtained and the **two hypotheses** were retained in this study.

## **CHAPTER – VI**

### **SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS**

In this chapter, summary, conclusion, implications to nursing practice and recommendations for further study are presented.

#### **Summary**

Pre-experimental design (one group pre-test - post-test) was used in this study to determine the effectiveness of progressive muscle relaxation technique on stress, anxiety and depression in infertile women. The study was conducted in Sudha Infertility Center, Erode. The sample size was 40 and the samples were selected by non probability convenience sampling technique. Structured interview schedule was used to collect the data. The collected data were analyzed using descriptive and inferential statistics. To test the hypothesis, paired 't' test and chi-square were used.

#### **Finding of the Study**

The major findings of the study was summarized as follows,

- Among 40 samples, 12(30%) belonged to the age group of 36-40 years, 14 (35%) samples had a per capita family income of Rs. 5001 – 10000, 35 (87.5%) samples had regular menstruation and 28 (70%) got married at an age between 21 - 25 years. 14 (35%) samples had a marital life of 11 – 15 years and all the 40 (100%) samples did not use any contraceptives within one year after marriage. 34 (85%) samples had no previous history of abortion, 33 (82.5%) samples had primary infertility and 31 (77.5%) samples had no family history of infertility.

- In pre-test, 16 (40%) samples had no stress and 24 (60%) samples mild stress. In post-test, 39 (97.5%) samples had no stress and only 1 (2.5%) had mild stress.
- In pre-test, 29 (72.5%) samples had mild anxiety, 9 (22.5%) had moderate anxiety and 2 (5%) had severe anxiety and in post-test, 33 (82.5%) samples had mild anxiety and 7 (17.5%) had moderate anxiety.
- In pre-test, 21 (52.5%) samples had minimal depression, 11 (27.5%) had mild depression and 4 (10%) had moderate or severe depression. In post-test, 31 (77.5%) samples had minimal depression, 4 (10%) had mild depression, 5 (12.5%) had moderate depression and none of them had severe depression.
- The pre-test mean stress score was  $24.08 (\pm 8.04)$ , the anxiety score was  $12.45 (\pm 7.24)$  and the depression score was  $14.1 (\pm 7.74)$ . The post-test mean stress score was  $10.83 (\pm 4.98)$ , anxiety score was  $9.28 (\pm 5.67)$  and depression score was  $10.03 (\pm 6.42)$ . The paired 't' value at  $p < 0.001$  level for stress, anxiety and depression were 17.20, 8.78 and 9.87 respectively which shows that the Progressive Muscle Relaxation Technique was effective in reducing the stress, anxiety and depression in infertile women. Hence  $H_1$  is retained.
- Significant association was found between family income per capita and type of infertility with the level of stress, age at puberty and previous history of abortion with the level of anxiety and age, family income per capita, age at marriage, duration of marital life, previous history of abortion and type of infertility with the level of depression. Hence  $H_2$  is retained for the above mentioned items.

## **Conclusion**

The study was done to determine the effectiveness of Progressive Muscle Relaxation Technique on stress, anxiety and depression in infertile women in selected a hospital in Erode. The result of this study showed that most of the infertile women had reduction in level of stress, anxiety and depression through Progressive Muscle Relaxation Technique.

## **Implications**

The findings of the study have implications in different branches of nursing i.e. nursing practice, nursing education, nursing administration and nursing research.

### **Nursing practice**

- ❖ Progressive Muscle Relaxation Technique can be introduced as a stimulating mode of intervention by the nurses for promoting relaxation among the patients suffering from various illnesses.
- ❖ PMRT can be incorporated into routine nursing intervention.
- ❖ PMRT can be given for staff nurses working in multi speciality units. This technique will help to reduce their work stress.

### **Nursing education**

It is important to have educational programme on PMRT for all nursing students, so that they can apply this technique to reduce the stress experienced by the inpatients in the hospital.

- ❖ Nurse educator can encourage students to conduct health teaching sessions on various relaxation methods.

- ❖ Staff development programme need to be arranged, so that the nurse educators can encourage the students to provide relaxation therapies to the patients.

### **Nursing administration**

- ❖ Nursing administrator can organize in-service education programmes for staff nurses regarding PMRT.
- ❖ Cassettes about PMRT can be made available to staff nurses. This will help the staff nurses to promote the comfort of the inpatients.
- ❖ 1Nurse administrator can make arrangements for the practice of PMRT in hospital, so that the staff nurses can provide calm, quiet, clean and safe environment to the patients for the practice.

### **Nursing research**

- ❖ Researchers should focus on non-pharmacological interventions to reduce stress, anxiety and depression.
- ❖ The findings should be disseminated through conferences, seminars and publications in professional, national and international journals.

### **Recommendations**

Recommendations include;

1. A similar study could be conducted with infertile couples to find out the effectiveness of the Progressive Muscle Relaxation Technique.
2. A comparative study can be conducted to find out the difference in level of stress, anxiety and depression in infertile men and women.
3. A study can be conducted with large sample size to generalize the results of the study.



4. A similar technique can be conducted using experimental and control group.
5. The nurses in the hospital can arrange PMRT sessions, especially for infertile women with longer duration of infertility.
6. Research can be conducted to find out the various innovative methods to reduce the level of stress, anxiety and depression.
7. A comparative study can be conducted to find out the difference in level of stress, anxiety and depression in primary and secondary infertile women.
8. Research can be done on various populations at various settings.
9. Research can be done to compare the level of stress in infertile women and those who suffer from other serious medical illnesses.

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## **APPENDIX- A**

### **Letter Seeking Permission to Conduct a Research Study**

03.07.2010

To

Managing Director,  
Sudha Fertility Center,  
Erode .

Respected Sir,

#### **Sub: Permission to conduct Research study - reg.**

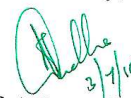
This is to introduce Ms. Anu C.Vijay, a final year M.Sc.(Nursing) student of our college. She is to conduct a research study to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc. (Nursing) Degree.

**Topic : “A Study to Determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women at a Selected Hospital, Erode”.**

I request you to kindly permit her to conduct the Research Study in your esteemed institution from 05-07-2010 to 31-07-2010. She will adhere to the institutional policies and regulations.

Thanking you.

Yours Sincerely,



(Prof. A. Jayasudha)

**PRINCIPAL**  
**Sri Gokulam College of Nursing.**  
**3/836, Periakalam, Neikkarapatti**  
**SALEM - 636 010**

Place: Salem

Date : 03-07-2010

**APPENDIX - B**  
**Tool for Data Collection**  
**Section – A**  
**Demographic Profile**

**Instruction:**

Dear participant, this section requires some of the personal information and you are requested to answer each question correctly. Your answer will be kept confidential.

**Sample No:**

**Date:**

1. Age in years

- a) 20-25 ☐
- b) 26-30 ☐
- c) 31-35 ☐
- d) 36-40 ☐
- e) 41-45 ☐

2. Religion

- a) Hindu ☐
- b) Christian ☐
- c) Muslim ☐
- d) Others ☐

3. Education

- a) No formal education ☐
- b) Primary school ☐
- c) High school ☐
- d) Higher secondary school ☐
- e) Under Graduate ☐
- f) Post Graduate ☐

4. Occupation

- a) Home maker ☐
- b) Business ☐
- c) Private employee ☐
- d) Government employee ☐



5. Family income per capita
- a) Below Rs. 2000 ☐
  - b) Rs. 2001-5000 ☐
  - c) Rs. 5001-10000 ☐
  - d) Above Rs. 10000 ☐
6. Type of family
- a) Nuclear family ☐
  - b) Joint family ☐
  - c) Extended family ☐
7. Age at puberty
- a) Below 12 years ☐
  - b) 12-14 years ☐
  - c) Above 14 years ☐
8. Regularity of menstruation
- a) Regular ☐
  - b) Irregular ☐
9. Age at marriage
- a) Below 20 years ☐
  - b) 21-25 years ☐
  - c) 26-30 years ☐
  - d) Above 30 years ☐
10. Type of marriage
- a) Consanguinous ☐
  - b) Non consanguinous ☐
11. Duration of marital life
- a) Below 5 years ☐
  - b) 6-10 years ☐
  - c) 11-15 years ☐
  - d) 16-20 years ☐
  - e) Above 20 years ☐
12. Use of contraceptives within one year after marriage
- a) Yes ☐
  - b) No ☐

13. Previous history of abortion

- a) Nil ☐
- b) Once ☐
- c) Twice ☐
- d) More than two times ☐

14. Type of infertility

- a) Primary ☐
- b) Secondary ☐

15. History of infertility in your family?

- a) Yes ☐
- b) No ☐

15. a) If yes-specify for whom? .....

## Section – B

### Structured Interview Schedule to Assess the Level of Stress

#### Instruction to the participants:

Dear participant, this section is to evaluate the level of stress and you are requested to respond correctly. Your answers will be kept confidential.

Sl. no.	Items	Never (0)	Occasionally (1)	Often (2)	Always (3)
<b>I</b>	<b>PSYCHOLOGICAL PROBLEMS</b>				
<b>A</b>	<b>Hopelessness</b>				
1	Do you feel you are alone?				
2	Do you feel that no body is there to help you?				
3	Do you feel that your life is worthless?				
4	Do you feel that you are leading an aimless life?				
5	Do you feel that infertility affects you physically and mentally?				
<b>B</b>	<b>Low Self Esteem</b>				
6	Do you feel ashamed when others talk about you?				
7	Do you feel your prestige is low because of your infertility?				
8	Do you cry openly for the life you are leading?				
9	Do you feel free to express your difficulties with your husband and relatives?				
10	Does your husband assault you because of absence of children?				

<b>C</b>	<b>Sexual Problems</b>				
11	Do you think your husband has an extramarital affair?				
12	Does your husband suspect you?				
13	Do you feel you are sexually satisfied?				
14	Do you think you satisfy your husband's sexual needs?				
<b>II</b>	<b>SOCIAL PROBLEMS</b>				
<b>A</b>	<b>Strained Interpersonal Relationship</b>				
15	Do you feel that you are maintaining good interpersonal relationship with others?				
16	Do you feel that you are picking up quarrels with others when your husband scolds you?				
17	Do you talk about your problems with other family members?				
<b>B</b>	<b>Inadequate Social Support</b>				
18	Do you feel no one is assisting you to take care of your family?				
19	Do you feel that other people in the society disturb you?				
20	Do you feel this society accepts you without a child?				
21	Do you get emotional support from friends/ relatives?				
<b>C</b>	<b>Financial Problems</b>				
22	Are you able to fulfill your family needs?				
23	Do you encounter financial crisis in				

	your family because of treatment?				
24	Do you think you are spending more than what you earn?				
25	Does your husband support you financially to carry out the family needs?				
<b>D</b>	<b>Attending Social Function</b>				
26	Do you feel ashamed to attend social functions?				
27	Do you find difficulty in maintaining interaction with others during social functions?				
28	Does your relatives respect you during social gatherings?				
29	Do you think you are neglected from family rituals as you are infertile?				

### Scoring Key

Level of Stress	Score
No stress	0-21
Mild	22-43
Moderate	44-65
Severe	66-87

## Section - C

### Structured Interview Schedule to Assess the Level of Anxiety

#### Instruction to the participants:

Dear participant, this section is to evaluate the level of anxiety and you are requested to respond correctly. Your answers will be kept confidential.

Sl. No.	Items	Not present (0)	Mild (1)	Moderate (2)	Severe (3)	Very severe (4)
1	<u>ANXIOUS MOOD</u> {worries, anticipation of the worst, fearful anticipation, irritability}					
2	<u>TENSION</u> {feelings of tension, fatigability, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax}					
3	<u>FEARS</u> {of dark, of strangers, of being left alone, of animals, of traffic, of crowd}					
4	<u>INSOMNIA</u> {difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors}					
5	<u>INTELLECTUAL</u> {difficulty in concentration, poor memory}					

6	<u>DEPRESSED MOOD</u> {loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing}					
7	<u>SOMATIC (MUSCULAR)</u> {pains and aches, twitching, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone}					
8	<u>SOMATIC (SENSORY)</u> {tinnitus, blurring of vision, hot and cold flushes, feeling of weakness, pricking sensation}					
9	<u>CARDIO VASCULAR SYMPTOMS</u> {tachycardia, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat}					
10	<u>RESPIRATORY SYMPTOMS</u> {pressure or constriction in chest, choking feelings, sighing, dyspnea}					
11	<u>GASTRO INTESTINAL SYMPTOMS</u> {difficulty in swallowing, wind abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness of bowels, loss of weight, constipation}					

12	<u>GENITO</u> <u>URINARY SYMPTOMS</u> { frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of frigidity, premature ejaculation, loss of libido, impotence }					
13	<u>AUTONOMIC SYMPTOMS</u> { dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair }					
14	<u>BEHAVIOUR AT</u> <u>INTERVIEW</u> { fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face, sighing or rapid respiration, facial pallor, swallowing etc. }					

### Scoring Key

Level of Anxiety	Score
Mild	< 17
Moderate	18-24
severe	25-30



## Section - D

### Structured Interview Schedule to assess the Level of Depression

#### Instruction to the participants:

Dear participant, this section is to evaluate the level of depression and you are requested to respond correctly. Your answers will be kept confidential.

#### 1. SADNESS

- a. I do not feel sad. ☐
- b. I feel sad much of the time. ☐
- c. I feel sad all the time. ☐
- d. I am so sad or unhappy that I can't stand it. ☐

#### 2. PESSIMISM

- a. I am not discouraged about my future. ☐
- b. I feel more discouraged about my future than I used to be. ☐
- c. I do not expect things to work out for me. ☐
- d. I feel my future is hopeless and will only get worse. ☐

#### 3. PAST FAILURE

- a. I do not feel like a failure. ☐
- b. I have failed more than I should have. ☐
- c. As I look back, I see a lot of failures. ☐
- d. I feel I am a total failure as a person. ☐

#### 4. LOSS OF PLEASURE

- a. I get as much pleasure as I ever did from the things I enjoy. ☐
- b. I don't enjoy things as much as I used to. ☐
- c. I get very little pleasure from the things I used to enjoy. ☐
- d. I can't get any pleasure from the things I used to enjoy. ☐

#### 5. GUILTY FEELINGS

- a. I don't feel particularly guilty. ☐
- b. I feel guilty over many things I have done or should have done. ☐
- c. I feel quite guilty most of the time. ☐
- d. I feel guilty all of the time. ☐

## 6. PUNISHMENT FEELINGS

- a. I don't feel I am being punished. ☐
- b. I feel I may be punished. ☐
- c. I expect to be punished. ☐
- d. I feel I am being punished. ☐

## 7. SELF- DISLIKE

- a. I feel the same about myself as ever. ☐
- b. I have lost confidence in myself. ☐
- c. I am disappointed in myself. ☐
- d. I dislike myself. ☐

## 8. SELF- CRITICALNESS

- a. I don't criticize or blame myself more than usual. ☐
- b. I am more critical of myself than I used to be. ☐
- c. I criticize myself for all of my faults. ☐
- d. I blame myself for everything bad that happens. ☐

## 9. SUICIDAL THOUGHTS OR WISHES

- a. I don't have any thoughts of killing myself. ☐
- b. I have thoughts of killing myself, but I would not carry them out. ☐
- c. I would like to kill myself. ☐
- d. I would kill myself if I had the chance. ☐

## 10. CRYING

- a. I don't cry anymore than I used to. ☐
- b. I cry more than I used to. ☐
- c. I cry over every little thing. ☐
- d. I feel like crying, but I can't. ☐

## 11. AGITATION

- a. I am no more restless or wound up than usual. ☐
- b. I feel more restless or wound up than usual. ☐
- c. I am so restless or agitated that it's hard to stay still. ☐
- d. I am so restless or agitated that I have to keep moving or doing something. ☐

## 12. LOSS OF INTEREST

- a. I have not lost interest in other people or activities. ☐
- b. I am less interested in other people or things than before. ☐
- c. I have lost most of my interest in other people or things. ☐
- d. It's hard to get interested in anything. ☐

## 13. INDECISIVENESS

- a. I make decisions about as well as ever. ☐
- b. I find it more difficult to make decisions than usual. ☐
- c. I have much greater difficulty in making decisions than I used to. ☐
- d. I have trouble making any decisions. ☐

## 14. WORTHLESSNESS

- a. I do not feel I am worthless. ☐
- b. I don't consider myself as worthwhile and useful as I used to. ☐
- c. I feel more worthless as compared to other people. ☐
- d. I feel utterly worthless. ☐

## 15. LOSS OF ENERGY

- a. I have as much energy as ever. ☐
- b. I have less energy than I used to have. ☐
- c. I don't have enough energy to do very much. ☐
- d. I don't have enough energy to do anything. ☐

## 16. CHANGES IN SLEEPING PATTERN

- a. I have not experienced any change in my sleeping pattern. ☐
- b.i) I sleep somewhat more than usual. ☐
- b.ii) I sleep somewhat less than usual. ☐
- c.i) I sleep a lot more than usual. ☐
- c.ii) I sleep a lot less than usual. ☐
- d.i) I sleep most of the day. ☐
- d.ii) I wake up 1-2 hours early and can't get back to sleep. ☐

## 17. IRRITABILITY

- a. I am no more irritable than usual. ☐
- b. I am more irritable than usual. ☐
- c. I am much more irritable than usual. ☐
- d. I am irritable all the time. ☐

### 18. CHANGES IN APPETITE

- a. I have not experienced any change in my appetite. ☐
- b.i) My appetite is somewhat less than usual. ☐
- b.ii) My appetite is somewhat greater than usual. ☐
- c.i) My appetite is much less than before. ☐
- c.ii) My appetite is much greater than usual. ☐
- d.i) I have no appetite at all. ☐
- d.ii) I crave food all the time. ☐

### 19. CONCENTRATION DIFFICULTY

- a. I can concentrate as well as ever. ☐
- b. I can't concentrate as well as usual. ☐
- c. It's hard to keep my mind on anything for very long. ☐
- d. I find I can't concentrate on anything. ☐

### 20. TIREDNESS OR FATIGUE

- a. I am no more tired or fatigued than usual. ☐
- b. I get more tired or fatigued more easily than usual. ☐
- c. I am too tired or fatigued to do a lot of the things I used to do. ☐
- d. I am too tired or fatigued to do most of the things I used to do. ☐

### 21. LOSS OF INTEREST IN SEX

- a. I have not noticed any recent change in my interest in sex. ☐
- b. I am less interested in sex than I used to be. ☐
- c. I am much less interested in sex now. ☐
- d. I have lost interest in sex completely. ☐

### Scoring Key

Level Of Depression	Score
Minimal depression	0-13
Mild depression	14-19
Moderate depression	20-28
Severe depression	29-63

## பிரிவு – அ

### தனிநபர் பற்றிய அடிப்படை விபரங்கள்

#### பின்பற்ற வேண்டியவை:

ஆராய்ச்சியாளர் பின்வரும் அனைத்து தகவல்களையும் பங்கேற்பவர்களிடமிருந்து சேகரித்து (✓) என்ற குறியை மிகவும் பொருத்தமானவைகளுக்கு எதிரேயுள்ள கட்டத்தில் இடுவார். தங்களது விபரங்கள் மறைமுகமாக வைக்கப்படும்.

தேதி

.....

பங்கேற்பவர்

எண்

.....

#### 1. வயது (வருடங்களில்)

அ. 20–25 வயது

☐

ஆ. 26–30 வயது

☐

இ. 31–35 வயது

☐

ஈ. 36–40 வயது

☐

உ. 41–45 வயது

☐

#### 2. மதம்

அ. இந்து

☐

ஆ. கிறிஸ்தவர்

☐

இ. இஸ்லாம்

☐

ஈ. மற்றவை

☐

#### 3. கல்வித்தகுதி

அ. முறையான கல்வி பயிலாதவர்

☐

ஆ. ஆரம்பப்பள்ளி

☐

இ. உயர்நிலைப்பள்ளி

☐

ஈ. மேல்நிலைப்பள்ளி

☐

உ. இளநிலைக்கல்வி

☐

ஊ. முதுநிலைக்கல்வி

☐

4. தொழில்

- அ. இல்லத்தரசி ☐
- ஆ. சுய தொழில் ☐
- இ. தனியார் ஊழியர் ☐
- ஈ. அரசு ஊழியர் ☐

5. குடும்ப வருமானம் தலா

- அ. 2000 ரூபாய்க்கு குறைவாக ☐
- ஆ. 2001–5000 ரூபாய் ☐
- இ. 5001 – 10000 ரூபாய் ☐
- ஈ. 10000 ரூபாய்க்கு மேல் ☐

6. குடும்பத்தின் வகை

- அ. தனிக்குடும்பம் ☐
- ஆ. கூட்டுக் குடும்பம் ☐
- இ. நீட்டிக்கப்பட்ட குடும்பம் ☐

7. பூப்பெய்திய வயது

- அ. 12 வயதிற்கு குறைவாக ☐
- ஆ. 12–14 வயது ☐
- இ. 14 வயதிற்கு மேல் ☐

8. மாதவிடாய் ஒழுங்கு முறை

- அ. ஒழுங்கானது ☐
- ஆ. ஒழுங்கற்றது ☐

9. திருமணத்தின் போது வயது

- அ. 20 வயதிற்கு குறைவாக ☐
- ஆ. 21–25 வயது ☐
- இ. 26–30 வயது ☐
- ஈ. 30 வயதிற்கு மேல் ☐

10. திருமணத்தின் வகை

அ. உறவு முறை

☐

ஆ. உறவு முறையல்லாத

☐

11. திருமண வாழ்க்கையின் காலம்

அ. 5 வருடங்களுக்கு குறைவாக

☐

ஆ. 6-10 வருடங்கள்

☐

இ. 11-15 வருடங்கள்

☐

ஈ. 16-20 வருடங்கள்

☐

உ. 20 வருடங்களுக்கு மேல்

☐

12. திருமணமான ஒரு வருடத்தில் கருத்தடை முறை உபயோகிக்கப்பட்டதா ?

அ. ஆம்

☐

ஆ. இல்லை

☐

13. கருச்சிதைவு ஏற்பட்டுள்ளதா ?

அ. இல்லை

☐

ஆ. ஒரு முறை

☐

இ. இரு முறை

☐

ஈ. இரண்டு முறைக்கு மேல்

☐

14. மலட்டுத்தன்மையின் வகை

அ. ஆரம்ப நிலை

☐

ஆ. இரண்டாம் நிலை

☐

15. குடும்பத்தில் யாரேனும் மலட்டுத்தன்மை உடையவர்களா ?

அ. ஆம்

☐

ஆ. இல்லை

☐

15. அ) ஆம், எனில் யாருக்கு.....

**பிரிவு - ஆ**

**மன அழுத்தத்தை மதிப்பிடும் வடிவமைக்கப்பட்ட நேர்காணல் படிவம்**  
**பங்கேற்பவர்களுக்கான அறிவுரைகள்**

அன்பார்ந்த பங்கேற்பாளர்களே, இப்பகுதி மன அழுத்தத்தின் அளவை மதிப்பிடுவதற்குரியது. தாங்கள் சரியான விவரங்களை அளிக்க கேட்டுக்கொள்கிறேன். தங்களது விவரங்கள் மறைமுகமாக வைக்கப்படும்.

வ. எண்	பொருள்	இல்லை (0)	அவ்வப்போது (1)	அடிக்கடி (2)	எப்பொழுதும் (3)
I.	<b>மனநீதியான பிரச்சனைகள்</b>				
அ.	<b>நம்பிக்கையின்மை</b>				
1	நீங்கள் தனிமையாக இருப்பதாக உணர்கிறீர்களா?				
2	உங்களுக்கு உதவ யாருமில்லை என்று உணர்கிறீர்களா?				
3	உங்கள் வாழ்க்கை மதிப்பற்றது என உணர்கிறீர்களா?				
4	நீங்கள் ஒரு நோக்கமற்ற வாழ்க்கை நடத்துவதாக உணர்கிறீர்களா?				
5	மலட்டுத்தன்மை உங்கள் உடல் மற்றும் மனநிலையை பாதிப்பதாக நீங்கள் உணர்கிறீர்களா?				
ஆ.	<b>சுய கௌரவக்குறைவு</b>				
6	மற்றவர்கள் உங்களைப் பற்றி பேசும் போது நீங்கள் வெட்கமாக உணர்கிறீர்களா?				
7	மலட்டுத்தன்மையின் காரணமாக உங்கள் கௌரவம் குறைவதாக நீங்கள் உணர்கிறீர்களா?				
8	நீங்கள் நடத்தும் வாழ்க்கை குறித்து வெளிப்படையாக அழுகிறீர்களா?				
9	உங்கள் கஷ்டங்களை உங்கள் கணவர் மற்றும்				



	உறவினர்களிடம் வெளியிடுவதை சுலபமானதாக உணர்கிறீர்களா?				
10	குழந்தையில்லாத காரணத்திற்காக உங்கள் கணவர் உங்களை அடிக்கிறாரா?				
	<b>இ. பாலுணர்வு பிரச்சனைகள்</b>				
11	தங்களது கணவருக்கு வேறு பெண்களுடன் தகாத உறவு உள்ளது என்று நினைக்கிறீர்களா?				
12	உங்கள் கணவர் உங்களை சந்தேகப்படுகிறாரா?				
13	நீங்கள் பாலுறவில் திருப்தியடைவதாக உணர்கிறீர்களா?				
14	நீங்கள் உங்கள் கணவரை பாலுறவில் திருப்திப்படுத்துவதாக நினைக்கிறீர்களா?				
<b>II</b>	<b>சமுதாய பிரச்சனைகள்</b>				
<b>அ.</b>	<b>திருப்தியற்ற பரஸ்பர உறவு</b>				
15	மற்றவர்களுடன் நல்ல சமூகமான உறவு உங்களுக்கு உள்ளதென உணர்கிறீர்களா?				
16	உங்கள் கணவர் உங்களைத் திட்டும் பொழுது நீங்கள் மற்றவர்களுடன் சண்டையிடுவதாக உணர்கிறீர்களா?				
17	உங்கள் பிரச்சனைகளைக் குறித்து உங்கள் குடும்ப அங்கத்தினரிடம் பகிர்ந்து கொள்கிறீர்களா?				
<b>ஆ.</b>	<b>போதிய சமூக ஆதரவு இல்லாமை</b>				
18	உங்கள் குடும்பப்பொறுப்பில் உங்களுக்கு எவரும் உதவவில்லை என்று உணர்கிறீர்களா?				
19	சமுதாயத்தில் காணப்படும் மற்ற மக்கள் உங்களை தொந்தரவு செய்வதாக உணர்கிறீர்களா?				
20	இந்த சமுதாயம் உங்களைக் குழந்தை இல்லாமல் ஏற்றுக்கொள்ளும் என்று				

	உணர்கிறீர்களா?				
21	உங்கள் மன உணர்ச்சிகளுக்கு உங்கள் நண்பர்கள் / உறவினர்களிடமிருந்து ஆதரவு கிடைக்கிறதா?				
இ.	<b>பொருளாதார பிரச்சனைகள்</b>				
22	உங்கள் குடும்பத் தேவைகளை உங்களால் பூர்த்தி செய்ய முடிகிறதா?				
23	நீங்கள் சிகிச்சையின் நிமித்தம் உங்கள் குடும்பத்தில் பணச்சிக்கல்களை சந்திக்கிறீர்களா?				
24	நீங்கள் சம்பாதிப்பதை விட அதிகம் செலவிடுவதாக நினைக்கிறீர்களா?				
25	உங்களது கணவர் உங்கள் குடும்ப தேவைகளை பூர்த்தி செய்ய பொருளாதார ரீதியாக ஆதரவளிக்கிறாரா?				
D	<b>சமூக விழாக்களில் கலந்துக் கொள்ளுதல்</b>				
26	நீங்கள் சமூக விழாக்களில் கலந்துக் கொள்ள வெட்கப்படுகிறீர்களா?				
27	நீங்கள் சமூக விழாக்களில் கலந்துக் கொள்ளும் பொழுது மற்றவர்களுடனான சமூகமான உறவு மேற்கொள்வது கஷ்டமாக உள்ளதா?				
28	உங்கள் உறவினர்கள் சமூக கூடுகைகளில் உங்களை மதிக்கிறார்களா?				
29	நீங்கள் மலட்டுத்தன்மை காரணமாக உங்கள் குடும்ப நிகழ்ச்சிகள் இருந்து ஒதுக்கப்படுவதாக நினைக்கிறீர்களா?				

## பிரிவு - இ

**கவலையின் அளவை மதிப்பிடும் வடிவமைக்கப்பட்ட நேர்காணல் படிவம்**  
**பங்கேற்பவர்களுக்கான அறிவுரைகள்**

அன்பார்ந்த பங்கேற்பாளர்களே, இப்பகுதி கவலையின் அளவை மதிப்பிடுவதற்குரியது. தாங்கள் சரியான விபரங்களை அளிக்க கேட்டுக் கொள்ளப்படுகிறீர்கள். தங்களது விபரங்கள் மறைமுகமாக வைக்கப்படும்.

வ. எண்	பொருள்	இல்லை (0)	மிகவும் மிதமாக (1)	முதிதாக (2)	தீவிரமாக (3)	மிகவும் தீவிரமாக (4)
1	<b>கவலையான மனநிலை</b> வருத்தம், மோசமான நிகழ்வுகளை எதிர்பார்த்தல், பயம் நிறைந்த எதிர்பார்ப்பு, எளிதில் கோபமடைதல்					
2	<b>மனஇறுக்கம்</b> மனநிலை இறுக்கமாக இருப்பதாக உணர்தல், சோர்வு, திடுக்கிடும் பிரதிபலிப்பு, எளிதில் அழக்கூடிய தன்மை, நடுங்குதல், அமைதியற்ற மனநிலை, மனத்தணிவின்மை					
3	<b>பயங்கள்</b> இருளைக் குறித்து, அந்நியர்களை குறித்து, தனிமையைக் குறித்து, மிருகங்களைக் கண்டு, சாலை போக்குவரத்தைக் குறித்து, கூட்ட நெரிசலைக் கண்டு					
4	<b>தூக்கமின்மை</b> தூங்குவதில் சிரமம், ஒழுங்கற்ற தூக்கம், திருப்தியில்லாத தூக்கம் மற்றும் சோர்வுடன் விழித்தெழுதல், கனவுகள், தூக்கத்தில் மூச்சடைப்பது போல், இரவில் திகிலடைதல் தோன்றுதல்					

5	<b>நுண்ணறிவுத்திறன்</b> மனதை ஒருமுகப்படுத்துவதில் சிரமம், மோசமான ஞாபக சக்தி					
6	<b>மந்தமான மனநிலை</b> ஆர்வமின்மை, பொழுதுபோக்கில் பிரியமின்மை, உற்சாகமின்மை, சீக்கிரமாக விழித்தெழுதல், தினமும் ஊசலாடும் மனம்					
7	<b>உடலீதியான (தசை சம்பந்தமான)</b> வலி மற்றும் தொடர்ச்சியான வலி, இழுத்து பிடித்தல், தீரென தூக்கிப் போடுதல், பற்களைக் கடித்தல், நிலையற்ற குரல், அதிகமான தசை இறுக்கம்					
8	<b>உடலீதியான (உணர்ச்சி சம்பந்தமான)</b> காது இரைச்சல், மங்கிய பார்வை குடாகி அல்லது குளிர்ந்து சிவந்த முகம், வலிமையற்ற உணர்வு, குத்தும் உணர்வு					
9	<b>இருதய சம்பந்தமான அறிகுறிகள்</b> ஆதிகமான இருதயத் துடிப்பு, படப்படப்பு, நெஞ்சுவலி, பதபதைக்கும் நாடித்துடிப்பு, மயக்கம் வருவது போன்ற உணர்வு, தவறிய துடிப்பு					
10	<b>மூச்சு சம்பந்தமான அறிகுறிகள்</b> மார்பு பகுதியில் அழுத்தம் அல்லது இறுக்கமான உணர்வு, தொண்டை அடைப்பது போன்ற உணர்வு, பெருமூச்சு விடுதல், மூச்சு விட சிரமம்					
11	<b>வயிறு மற்றும் குடல் சம்பந்தமான அறிகுறிகள்</b> விழுங்குவதில் சிரமம், குடல் காற்ற ஏற்ற வலி, நெஞ்செரிச்சல், வயிறு நிறைந்த உணர்வு, குமட்டல், வாந்தி, வயிறு இரைச்சல், வயிற்றுக் கழிச்சல், வயிற்றுப் போக்கு, எடை குறைதல், மலச்சிக்கல்					

12	<p><b>பாலுறுப்பு மற்றும் சிறுநீரக சம்பந்தமான அறிகுறிகள்</b></p> <p>அடிக்கடி சிறுநீர் கழித்தல், சிறுநீர் கழிக்க அவசரம், மாதவிடாய் இன்மை, மாதவிடாயின் போது அதிகமான உதிரப்போக்கு, பாலுணர்வு அற்ற பெண்மை</p>					
13	<p><b>நரம்பு சம்பந்தமான அறிகுறிகள்</b></p> <p>உலர்ந்த வாய் சிவந்து போதல், வெளிருதல், எளிதில் வியர்த்தல், தலை சுற்றல், இறுக்கத்தினால் வரும் தலைவலி, தோல் சிலிர்த்து முடி எழும்பி காணப்படுதல்</p>					
14	<p><b>நேர்க்காணலின் போது நடத்தை</b></p> <p>அமைதியின்மை, ஓய்வின்மை, கைகள் நடுங்குதல், உயர்த்திய புருவங்கள், திருப்தியற்ற முகம், பெருமூச்சு அல்லது வேகமாக சுவாசித்தல், வெளிறிய முகம், அடிக்கடி எச்சில் விழுங்குதல்</p>					

## பிரிவு - ஈ

**மந்த நிலையின் அளவை மதிப்பிடும் வடிவமைக்கப்பட்ட நேர்காணல் படிவம்**  
**பங்கேற்பவர்களுக்கான அறிவுரைகள்**

அன்பார்ந்த பங்கேற்பாளர்களே, இப்பகுதி மந்த நிலையின் அளவை மதிப்பிடுவதற்குரியது. தாங்கள் சரியான விபரங்களை அளிக்க கேட்டுக் கொள்ளப்படுகிறீர்கள். தங்களது விபரங்கள் மறைமுகமாக வைக்கப்படும்.

### 1. கவலை

- அ. நான் கவலையாக உணரவில்லை ☐
- ஆ. நான் பெரும்பாலான நேரங்களில் கவலையுடன் காணப்படுவேன் ☐
- இ. நான் எப்பொழுதும் கவலையாக காணப்படுவேன். ☐
- ஈ. என்னால் தாங்கிக்கொள்ள முடியாத அளவுக்கு நான் கவலையுடன் காணப்படுவேன் ☐

### 2. எதிர்மறைப்போக்கு

- அ. என்னுடைய எதிர்காலத்தைக் குறித்து நான் துணிச்சலில்லாமல் இல்லை. ☐
- ஆ. நான் என்னுடைய எதிர்காலத்தை குறித்து கவனமாக இருக்கிறேன் ☐
- இ. சாதாரணத்தைவிட தைரியக்குறைவாக உள்ளேன். ☐
- ஈ. என்னுடைய எதிர்காலம் நம்பிக்கையற்றதாகவும், மிகவும் மோசமடையக்கூடியதாகவும் இருக்கும் என்று நினைக்கிறேன். ☐

### 3. முந்தைய தோல்வி

- அ. நான் தோல்வியாக கருதவில்லை ☐
- ஆ. நான் தோல்வியடைய கூடியதை விட அதிகமாக தோல்வியடைந்து விட்டேன் ☐
- இ. நான் முந்தையக்காலங்களை நினைத்து பார்க்கும்போது அநேக தோல்விகள் உள்ளன. ☐
- ஈ. ஒரு மனிதன் என்ற நிலையில் நான் முழுமையாக தோல்வியடைந்துள்ளேன் ☐

### 4. இன்பமின்மை

- அ. நான் சாதாரணமாக இன்பமாக இருக்கும் விஷயங்களில் பிரியம் கொள்கிறேன் ☐
- ஆ. நான் சாதாரணமாக இருப்பதை போல் விஷயங்களில் இன்பம் கொள்ளவில்லை. ☐
- இ. நான் சாதாரணமாக இன்பமாக இருக்கும் விஷயங்களில் சிறிதே பிரியம் கொள்கிறேன் ☐
- ஈ. நான் சாதாரணமாக இன்பமாக இருக்கும் விஷயங்களில் பிரியம் கொள்வதே இல்லை. ☐

5. குற்ற உணர்வு

- அ. நான் குறிப்பாக குற்றவுணர்வடைவதில்லை. ☐
- ஆ. நான் செய்த அல்லது செய்ய தவறிய பல காரியங்களை குறித்து குற்ற உணர்வடைகிறேன். ☐
- இ. நான் பலநேரங்களில் குற்ற உணர்வுடன் காணப்படுகிறேன். ☐
- ஈ. நான் எப்பொழுதும் குற்ற உணர்வுடன் காணப்படுவேன். ☐

6. தண்டனை உணர்வு

- அ. நான் தண்டிக்கப்படுவதாக உணருவதில்லை. ☐
- ஆ. நான் தண்டிக்கப்படுவேன் என்று உணருகிறேன். ☐
- இ. நான் தண்டிக்கப்படுவேன் என்று எதிர்பார்க்கிறேன் ☐
- ஈ. நான் தண்டிக்கப்படுவதாக உணர்கிறேன். ☐

7. சுய வெறுப்பு

- அ. நான் எப்பொழுதும் போலவே என்னை நினைக்கிறேன் ☐
- ஆ. நான் என்மேல் உள்ள நம்பிக்கையை இழந்துவிட்டேன் ☐
- இ. நான் என்னில் ஏமாற்றமடைந்துள்ளேன் ☐
- ஈ. நான் என்னை வெறுக்கிறேன் ☐

8. சுயபரிசோதனை

- அ. நான் சாதாரணத்தைவிட அதிகமாக என்னை குறைகூறுவதில்லை ☐
- ஆ. நான் சாதாரணத்தைவிட அதிகமாக என்னை ஆராய்ந்து பார்க்கிறேன். ☐
- இ. என்னுடைய எல்லா பிழைகளுக்கும் என்னை நானே குற்றம் சாட்டுகிறேன். ☐
- ஈ. அனைத்து கெட்ட நிகழ்வுகளுக்கும் என்னை நானே குறை கூறுகிறேன். ☐

9. தற்கொலை எண்ணங்கள்

- அ. எனக்கு தற்கொலை எண்ணங்கள் ஏதுமில்லை. ☐
- ஆ. எனக்கு தற்கொலை எண்ணங்கள் உள்ளன, ஆனால் நான் அவ்வாறு செய்து கொள்வதில்லை. ☐
- இ. நான் தற்கொலை செய்து கொள்ள விரும்புகிறேன். ☐
- ஈ. நான் சந்தர்ப்பம் கிடைத்தால், தற்கொலை செய்து கொள்வேன். ☐

10. அழகை

அ. நான் சாதாரணமாய் இருப்பதைக் காட்டிலும் அதிகமாக அழுவதில்லை.

☐

ஆ. நான் சாதாரணத்தைவிட அதிகமாக அழுகிறேன்.

☐

இ. நான் சிறிய சிறிய விஷயங்களுக்காக அழுகிறேன்.

☐

ஈ. நான் அழுவேண்டுமென்று நினைக்கிறேன், ஆனால் முடியவில்லை.

☐

11. சமாதானமின்மை

அ. நான் சாதாரணத்தைவிட அமைதியற்ற நிலையில் இல்லை.

☐

ஆ. நான் சாதாரணத்தைவிட அதிக அமைதியற்ற நிலையில் இல்லை.

☐

இ. நான் மிகவும் அமைதியற்ற நிலையில் உள்ளமையால் என்னால் ஓரிடத்தில் இருப்பது கடினமாயுள்ளது.

☐

ஈ. நான் மிகவும் அமைதியற்ற நிலையில் நான் எப்பொழுதும் எதையாவது செய்து கொண்டிருக்கிறேன்.

☐

12. நாட்டமின்மை

அ. நான் மற்ற மக்களிலோ, செயல்களிலோ நாட்டம் இழக்கவில்லை

☐

ஆ. நான் மற்ற மக்களிலும், பொருட்களிலும் சிறிதளவு மட்டுமே நாட்டம் கொள்கிறேன்.

☐

இ. நான் மற்ற மக்களிலும், பொருட்களிலும் பெரும்பாலான அளவு நாட்டத்தை இழந்து விட்டேன்.

☐

ஈ. எதிலும் நாட்டம் கொள்வது கடினமாக உள்ளது.

☐

13. தீர்மானமின்மை

அ. நான் எப்பொழுதும் போலவே நன்றாக தீர்மானம் எடுக்கிறேன்.

☐

ஆ. நான் சாதாரணத்தைவிட முடிவெடுப்பதை கடினமாக காண்கிறேன்

☐

இ. நான் சாதாரணத்தைவிட முடிவெடுப்பதற்கு மிகவும் கடினப்படுகிறேன்

☐

ஈ. எனக்கு எந்தவகையான முடிவெடுப்பதும் பிரச்சனையாக உள்ளது.

☐

14. மதிப்பின்மை

அ. என்னை மதிப்பில்லாதவன் என்று நான் உணரவில்லை.

☐

ஆ. நான் சாதாரணத்தைவிட என்னை மதிப்புள்ளவன்வராகவோ பிரயோஜனமுள்ளவராகவோ கருதவில்லை

☐

இ. நான் மற்றவர்களுடன் என்னை ஒப்பிட்டுப் பார்க்கும் பொழுது என்னை சிறிதும் மதிப்பில்லாதவன் என்று உணருகிறேன்.

☐

ஈ. நான் முற்றிலும் மதிப்பில்லாதவன்

☐



15. சக்தியின்மை

- அ. நான் எப்பொழுதும் போல அதிகம் சக்தி கொண்டுள்ளேன். ☐
- ஆ. நான் சாதாரணத்தைவிட சிறிதளவு சக்தியே கொண்டுள்ளேன். ☐
- இ. எனக்கு எதுவும் நன்றாக செய்வதற்கு போதிய சக்தி இல்லை. ☐
- ஈ. எனக்கு எதுவுமே செய்வதற்குரிய சக்தியில்லை. ☐

16. தூக்க முறையில் மாற்றங்கள்

- அ. நான் எனது தூக்கமுறையில் எந்த மாற்றத்தையும்  
அனுபவிக்கவில்லை ☐
- ஆ. நான் சாதாரணத்தைவிட சிறிது அதிகமாக தூங்குகிறேன். ☐
- இ. i. நான் சாதாரணத்தைவிட மிகவும் அதிகமாக தூங்குகிறேன் ☐  
ii. நான் சாதாரணத்தைவிட மிகவும் குறைவாக தூங்குகிறேன் ☐
- ஈ. i. நான் தினமும் பெரும்பாலான நேரம் தூங்குகிறேன் ☐  
ii. நான் 1 - 2 மணிநேரம் முன்னதாகவே விழித்துக் கொள்கிறேன். ☐  
அதன்பின்பு என்னால் தூங்க முடிவதில்லை. ☐

17. கோபமடைதல்

- அ. நான் சாதாரணமாயிருப்பதை விட எளிதில் கோபமடைவதில்லை. ☐
- ஆ. நான் சாதாரணமாயிருப்பதை விட எளிதில் கோபமடைகிறேன் ☐
- இ. நான் சாதாரணமாயிருப்பதை விட மிகவும் எளிதில்  
கோபமடைகிறேன் ☐
- ஈ. நான் எப்பொழுதும் கோபமாகவே காணப்படுகிறேன். ☐

18. பசியில் மாற்றங்கள்

- அ. நான் என்னுடைய பசியில் எந்த மாற்றத்தையும்  
அனுபவிக்கவில்லை ☐
- ஆ. i. என்னுடைய பசி சாதாரணத்தைவிட சிறிதளவு குறைந்துள்ளது ☐  
ii. என்னுடைய பசி சாதாரணத்தைவிட சிறிதளவு அதிகரித்துள்ளது ☐
- இ. i. என்னுடைய பசி முந்தையதைவிட மிகவும் குறைந்துள்ளது ☐  
ii. என்னுடைய பசி சாதாரணத்தைவிட மிகவும் குறைந்துள்ளது ☐
- ஈ. i. எனக்கு பசியே இல்லை ☐  
ii. நான் உணவிற்காக எப்பொழுதும் தீவிர ஆவலுடன்  
காணப்படுகிறேன் ☐

19. மன ஒருமைப்பாட்டில் கடினம்

- அ. என்னால் எப்பொழுதும் போலவே மனதை  
ஒருமுகப்படுத்த முடிகிறது ☐

ஆ. என்னால் சாதாரணமாக மனதை

ஒருமுகப்படுத்த முடிகிறது.

☐

இ. என்னுடைய மனதை ஒரு விஷயத்தின் மீது நீண்டகாலம்

வைக்க கடினமாக உள்ளது.

☐

ஈ. என்னால் எதிலும் மனதை ஒருமுகப்படுத்த முடியாததாக

காண்கிறேன்.

☐

20. சோர்வு

அ. நான் சாதாரணத்தைவிட சோர்வாக இல்லை

☐

ஆ. நான் சாதாரணத்தைவிட அதிகமாகவும் எளிதாகவும்

சோர்வடைகிறேன்.

☐

இ. நான் சாதாரணமாக செய்யும் பல விஷயங்களில்

மிகவும் சோர்வடைகிறேன்.

☐

ஈ. நான் சாதாரணமாக செய்யும் பெரும்பாலான விஷயங்களில்

மிகவும் அதிகமாக சோர்வடைகிறேன்.

☐

21. உடலுறவில் நாட்டமின்மை

அ. நான் என்னுடைய உடலுறவில் தற்போது எந்தவிதமான

மாற்றத்தையும் கவனிக்கவில்லை.

☐

ஆ. நான் சாதாரணமாகயிருப்பதைவிட உடலுறவில் சிறிதளவு

நாட்டம் இழந்துள்ளேன்.

☐

இ. நான் இப்பொழுது உடலுறவில் மிகவும் நாட்டம் இழந்துள்ளேன்

☐

ஈ. நான் உடலுறவில் நாட்டத்தை முழுமையாக இழந்துவிட்டேன்.

☐

### **Steps of Progressive Muscle Relaxation Technique**

- Lie straight on a flat surface (without pillow).
- Close your eyes.
- Take deep breaths for 5 – 10 times.
- Clench the right hand into fist and keep that position as long as possible.
- Loose the fist slowly.
- Repeat it once more.
- Do the same for the left hand twice.
- Close the fist, flex the elbow and contract the muscles of the right hand. Remain in that position as long as possible.
- Extend the elbow, open the fist and bring the right hand to the initial position slowly.
- Repeat it once more.
- Do the same for the left hand two times.
- Shrunk the shoulders and be in that position as long as possible.
- Bring the shoulders to the initial position slowly.
- Repeat it once more.
- Pull the shoulders back and remain in that position as long as possible.
- Bring the shoulders to the initial position.
- Repeat it once more.
- Take a deep breath and hold it as long as possible.
- Exhale slowly.
- Repeat it once more.
- Pull the stomach inside as far as possible and remain in that position for few seconds.
- Make the stomach muscles relaxed bring it to the initial position.
- Repeat it once more.
- Push out the stomach as far as possible and remain in that position as long as possible.
- Make the stomach muscles relaxed and bring it to the initial position.
- Repeat it once more.
- Press the thighs from the sides with the palms and remain in that position as long as possible.
- Release the tension on the thighs by bringing the hands to the initial position.

- Repeat it once more.
- Press the knee joints firmly on the flat surface and thus tightens the calf muscles.
- Release the tension on the calf muscles by bringing the knee joints to the initial position.
- Repeat it once more.
- Point the toes for few seconds.
- Bring the toes to the initial position.
- Pull the toes towards own self and remain in that position as long as possible.
- Bring the toes to the initial position.
- Turn the head to the right side and remain in that position for few seconds.
- Bring the head to the initial position.
- Turn the head to left side and keep that position for few seconds.
- Bring the head to the initial position.
- Repeat it once more.
- Clench the teeth tightly for few seconds.
- Bring the teeth to the initial position slowly.
- Repeat it once more.
- Close the mouth by folding the lips inside and remain in that position as long as possible.
- Bring the mouth to the initial position.
- Repeat it once more.
- Close the eyes tightly and remain in that position for few seconds.
- Open the eyes slowly.
- Repeat it once more.
- Raise the eyebrows, wrinkle the forehead and remain in that position as long as possible.
- Bring the eyebrows to the initial position slowly.
- Repeat it once more.
- Concentrate for 5 minutes on anything which you like.
- Open the eyes slowly.

## உடல் பயிற்சி செய்யும் முறை

- நேராக படுக்கவும் (தலையணை இல்லாமல்)
- கண்களை மூடவும்
- 5-10 முறை மூச்சை ஆழமாக இழுத்து விடவும்
- வலது கைவிரல்களை இறுக்கமாக மூடவும். இயன்ற வரை அப்படியே வைத்திருக்கவும்.
- மெதுவாக விரல்களை திறக்கவும்.
- ஒரு முறைக் கூட இவ்வாறு செய்யவும்.
- இவ்வாறு இரு முறை இடது கைவிரல்களிலும் செய்யும்.
- விரல்களை நன்கு மூடி முழங்கையை மடக்கி, தசைகளை நன்கு இறுக செய்யும். இயன்ற வரை அப்படியே வைத்திருக்கவும்.
- முழங்கையை நீட்டி கைவிரல்களை திறந்து கையை முந்தைய நிலைக்கு கொண்டு வரவும்.
- இவ்வாறு ஒரு முறைக்கூட செய்யவும்.
- இதே போன்று இடது கையிலும் இரு முறை செய்யவும்.
- தோள்பட்டைகளை உயர்த்தி இயன்ற வரை அப்படியே வைத்திருக்கவும்.
- முந்தைய நிலைக்கு மெதுவாக கொண்டு வரவும்.
- ஒரு முறைக்கூட அவ்வாறு செய்யவும்.
- தோள்பட்டைகளை பின்புறமாக இழுத்து இயன்ற வரை அவ்வாறு வைத்திருக்கவும்.
- தோள் பட்டைகளை முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறைக்கூட அவ்வாறு செய்யவும்
- மூச்சை நன்றாக இழுத்து இயன்ற வரை அவ்வாறு வைத்திருக்கவும்
- மெதுவாக மூச்சை வெளியே விடவும்.
- ஒரு முறைக்கூட இவ்வாறு செய்யவும்.
- வயிறை உட்புறமாக இழுத்து இயன்ற வரை அவ்வாறு வைத்திருக்கவும்.
- வயிற்று தசைகளை தளர்த்தி வயிறை முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- வயிற்றை வெளிப்புறமாக தள்ளி இயன்ற வரை அவ்வாறு வைத்திருக்கவும்.
- வயிற்று தசைகளை தளர்த்தி வயிறை முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- இரு தொடைகளையும் இரு கைகளால் உட்புறமாக தள்ளவும் இயன்ற வரை அவ்வாறு வைத்திருக்கவும்.
- கைகளை முந்தைய நிலைக்கு கொண்ட வந்து தொடைகளைத் தளர்த்திக் கொள்ளவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- முழுங்கால்களை தரை நோக்கி அழுத்தி கால் தசைகளை இறுக்கிக் கொள்ளவும்.

- கால் தசைகளை தளர்த்தி முழங்கால்களை முந்தைய நிலைக்கு கொண்டு வரவும்.
- இவ்வாறு ஒரு முறை செய்யவும்
- கால் விரல்களை முன்னோக்கி நன்றாக நீட்டவும்
- கால் விரல்களை முந்தைய நிலைக்கு கொண்டு வரவும்
- கால் விரல்களை பின் நோக்கி இழுத்து அவ்வாறு வைத்துக் கொள்ளவும்,
- கால் விரல்களை முந்தைய நிலைக்கு கொண்டு வரவும்
- தலையை வலப்புறமாக திருப்பி சில நொடிகள் அவ்வாறு வைத்திருக்கவும்.
- தலையை முந்தைய நிலைக்கு கொண்டு வரவும்
- தலையை இடப்புறமாக திருப்பி சில நொடிகள் அவ்வாறு வைத்துக்கொள்ளவும்.
- தலையை முந்தைய நிலைக்கு கொண்டு வரவும்
- ஒரு முறைக் கூட தலையை அவ்வாறு செய்து கொள்ளவும்.
- பற்களை சில நொடிகள் நன்று இறுக்கமாக கடிக்கவும்.
- மெதுவாக பற்களை முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- உதடுகளை மடித்து வாயை மூடி இயன்ற வரை அவ்வாறு வைத்து கொள்ளவும்.
- உதடுகளை முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- கண்களை சில நொடிகள் இறுக்கமாக மூடிக்கொள்ளவும்.
- மெதுவாக கண்களை திறக்கவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- கண் புருவங்களை உயர்த்தி நெற்றியை சுருக்கி இயன்ற வரை இவ்வாறு வைத்துக்கொள்ளவும்.
- கண் புருவங்களை மெதுவாக முந்தைய நிலைக்கு கொண்டு வரவும்.
- ஒரு முறை கூட இவ்வாறு செய்யவும்.
- உங்களுக்கு பிடித்த ஏதேனும் ஒரு நிகழ்ச்சியில் 5 நிமிங்களுக்கு கவனத்தை செலுத்தவும்.
- கண்களை மெதுவாக திறக்கவும்.

தொகுத்தவர்  
bršć mD r.é#CE  
முதுநிலை செவிலியர்  
பட்டயப்படிப்பு,  
மனநில செவிலியர் பிரிவு,  
இரண்டாம் ஆண்டு,  
ஸ்ரீ கோகுலம் செவிலியர் கல்லூரி  
சேலம்.

## Daily Record Sheet on PMRT

[illegible]

**தினசரி உடற்பயிற்சி செய்வதை பதிவு செய்யும் அட்டவணை**

[illegible]



### Observation Checklist

S. No	Steps of PMRT	Done	Not done
1	Lie straight on a flat surface without pillow		
2	Close the eyes		
3	Take deep breaths for 5-10 times		
4	Clench the right hand into fist and keep that position as long as possible		
5	Loose the fist slowly		
6	Repeat the steps 4 & 5		
7	Repeat the steps 4, 5 & 6 for the left hand		
8	Close the fist, flex the elbow and contract the muscles of the right hand and remain in that position as long as possible		
9	Extend the elbow, open the fist and bring the right hand to the initial position slowly		
10	Repeat the steps 7 & 8		
11	Repeat the steps 8, 9 & 10 for the left hand		
12	Shrunk the shoulders and be in that position as long as possible		
13	Bring the shoulders to the initial position slowly		
14	Repeat the steps 12 & 13		
15	Pull the shoulders back and remain in that position for few seconds		
16	Push the shoulders to the initial position		
17	Repeat the steps 15 & 16		
18	Take a deep breath and hold it as long as possible		
19	Exhale it out slowly		
20	Repeat the steps 18 & 19		
21	Pull in the stomach as far as possible and remain in that position for few seconds		
22	Make the stomach muscles relaxed and bring it to the initial position		

23	Repeat the steps 21 & 22		
24	Push out the stomach as far as possible, make it tensed and remain in that position as long as possible.		
25	Make the stomach muscles relaxed and bring it to the initial position		
26	Repeat the steps 24 & 25		
27	Press the thighs from the sides with the palms and remain in that position as long as possible		
28	Release the tension on the thighs by bringing the hand to the initial position		
29	Repeat the steps 27 & 28		
30	Press the knee joints firmly on the flat surface and thus tighten the calf muscles for few seconds		
31	Release the tension on the calf muscles by bringing the knee joints to the initial position		
32	Repeat the steps 30 & 31		
33	Point the toes and keep that position for few seconds		
34	Bring the toes to the initial position		
35	Pull the toes towards oneself and remain in that position as long as possible		
36	Release the tension by bringing the toes to the initial position		
37	Repeat the steps 33, 34, 35 & 36		
38	Extend the neck muscle by turning the head towards right side. Remain in that position for few seconds		
39	Bring the head to the initial position		
40	Turn the head to left side and remain in that position for few seconds		
41	Bring the head straight		
42	Repeat the steps 38, 39, 40 & 41		

43	Clench the teeth tightly for few seconds		
44	Release the tension by bringing the teeth to the initial position		
45	Repeat the steps 43 & 44		
46	Tight the muscles around the lips by pursing the lips. Remain in that position as long as possible		
47	Bring the lips to the initial position		
48	Repeat the steps 46 & 47		
49	Close the eyes tightly and remain in that position for few seconds		
50	Release the tension very slowly		
51	Repeat the steps 49 & 50		
52	Raise the eyebrows as high as possible, wrinkle the forehead and remain in that position as long as possible		
53	Return the eyebrows to the initial position		
54	Repeat the steps 52 & 53		
55	Continue in the lying down position with closed eyes for 5 minutes.		
56	Open the eyes slowly.		

## **Procedure**

### **Progressive Muscle Relaxation Technique**

#### **Introduction**

Kinetic or movement related stress relief practices need not involve a lot of exertion to be effective. Progressive Muscle Relaxation Technique, or PMRT, is a stress relief technique that relies upon subtle rather than gross muscular movements to promote relaxation and tension relief.

#### **Definition**

Progressive Muscle Relaxation Technique, or PMRT refers to tightening and releasing all the major muscle groups of the body in an exaggerated fashion which will end up in a feeling of more relaxed and peace with oneself.

#### **Purpose**

To reduce stress, anxiety and depression in infertile women.

#### **Age Group**

Infertile women aged between 20-45 years.

#### **Preparation for PMRT**

- Explain the steps of procedure to the infertile women.
- Ensure the co-operation.
- Prepare the environment.

#### **Procedure**

- Make the women lie down on a flat surface (without pillow).
- Ask them to close their eyes.
- Instruct them to take deep breaths for 5 – 10 times.
- Instruct them to clench the right hand into fist and keep that position as long as possible.
- Ask to relax the fist slowly.
- Instruct to do the same for the left hand.
- Ask to close the fist, flex the elbow and contract the muscles of the right hand. Remain in that position as long as possible.
- Ask to extend the elbow, open the fist and bring the right hand to the initial position slowly.
- Instruct to do the same for the left hand.
- Instruct to shrunk the shoulders and be in that position as long as possible.
- Ask to bring the shoulders to the initial position slowly.

- Ask to pull the shoulders back and remain in that position as long as possible.
- Instruct to bring the shoulders to the initial position.
- Instruct to take a deep breath and hold it as long as possible.
- Ask to exhale slowly.
- Ask to pull the stomach inside as far as possible and remain in that position for few seconds.
- Instruct to make the stomach muscles relaxed and bring it to the initial position.
- Ask to push out the stomach as far as possible and remain in that position as long as possible.
- Instruct to make the stomach muscles relaxed and bring it to the initial position.
- Instruct to press the thighs from the sides with the palms and remain in that position as long as possible.
- Ask to release the tension on the thighs by bringing the hands to the initial position.
- Ask to press the knee joints firmly on the flat surface and thus tighten the calf muscles.
- Instruct to release the tension on the calf muscles by bringing the knee joints to the initial position.
- Instruct to point the toes for few seconds.
- Instruct to bring the toes to the initial position.
- Ask to pull the toes towards own self and remain in that position as long as possible.
- Instruct to bring the toes to the initial position.
- Ask to turn the head to the right side and remain in that position for few seconds.
- Instruct bring the head to the initial position.
- Instruct to turn the head to left side and keep that position for few seconds.
- Ask to bring the head to the initial position.
- Instruct to clench the teeth tightly for few seconds.
- Ask to bring the teeth to the initial position slowly.
- Ask to close the mouth by folding the lips inside and remain in that position as long as possible.
- Instruct to bring the mouth to the initial position.
- Ask to close the eyes tightly and remain in that position for few seconds.
- Instruct to open the eyes slowly.
- Ask to raise the eyebrows, wrinkle the forehead and remain in that position as long as possible.

- Ask to bring the eyebrows to the initial position slowly.
- Instruct to concentrate for 5 minutes on anything which they like.
- Instruct to open the eyes slowly.

Each step of the procedure should be carried out for 2 times.

**After care**

- Provide comfortable position to woman.
- Document the procedure.

## **APPENDIX- C**

### **Letter Requesting Opinion and Suggestions of Experts for Content Validity of the Research Tools**

From

**Ms.Anu C.Vijay,**  
Final Year M.Sc., (N)  
Sri Gokulam College of Nursing,  
Salem, Tamil Nadu.

To,

Respected Sir/ Madam,

**Sub: Requesting opinion and suggestions of experts for establishing  
content validity of the tools.**

I, **Ms. Anu C.Vijay**, a Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, Salem. I have selected the topic mentioned below for the research project to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai for the partial fulfilment of Master's Degree in Nursing.

**Topic: “A Study to Determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women at a Selected Hospital, Erode”.**

I wish to request you kindly validate the tool and give your expert opinion for necessary modification. I will be grateful to you for this.

Thanking you

Yours sincerely,

Place : Salem

Date :

**(Ms.Anu C.Vijay)**

## **APPENDIX- D**

### **Certificate of Validation**

This is to certify that the tool developed by **Ms. Anu C. Vijay**, Final year M. Sc. Nursing student of Sri Gokulam College of Nursing, Salem (affiliated to The Tamil Nadu Dr. M.G.R. Medical University) is validated and can proceed with this tool and content for the main study entitled **“A Study to Determine the Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women at a Selected Hospital, Erode”**.

Date :

Signature:

Name and designation



## APPENDIX- E

### List of Experts for Content Validity

1. **Dr. C. Bhaskar, M.D., (Psych)**  
Consultant Psychiatrist,  
  
Sri Gokulam Hospital,  
Salem.
2. **Mr. Michel Jayaraj**  
Consultant Psychologist,  
Shanmuga Hospitals,  
Salem.
3. **Mrs. Lalitha Vijay, M.Sc.(N),**  
Associate Professor,  
Department of Mental Health Nursing,  
Sri Gokulam College of Nursing,  
Salem.
4. **Mr. Aravind Babu, M.Sc. (N).,**  
Principal  
  
Dhanvantri College of Nursing,  
  
Erode.
5. **Mrs Naganandhini, M.Sc., (N)**  
Professor,  
Department of Mental Health Nursing,  
Vinayaka Mission Annapoorana College of Nursing,  
Salem.
6. **Mrs. Meera Saravanan, M.Sc.(N),**  
Associate Professor,  
Department Mental Health Nursing,  
PSG College of Nursing,  
Coimbatore.
7. **Mrs. S. Vanitha, M.Sc.(N),**  
Associate Professor,

Department Mental Health Nursing,  
College of Nursing,  
SRIPMS, Coimbatore.

**APPENDIX- F**

**Certificate of Training**

'PRAISE THE LORD'

Phone : 430420  
Cell : 9362112080

**PEACE COUNSELLING CENTRE**

(Centre for Psychological care)

**S. MICHAEL JAYARAJ**, MA., M.Phil. Ph.D  
Consultant Psychologist.

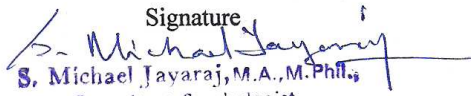
133-A4, Buddhar Street,  
Thiruvakoundanur,  
Salem - 636 005.

Ref :

Date: 31-5-2010

**TO WHOMSOEVER IT MAY CONCERN**

I hereby certify that **Ms. Anu C. Vijay**, M.Sc. (N) Final Year Student  
underwent training on Jacobson's Progressive Muscle Relaxation Exercise for the  
period of 1-5-2010 to 31-5-2010.

Signature  
  
**S. Michael Jayaraj**, M.A., M.Phil.,  
Consultant Psychologist,  
133-A4, Buddhar Street,  
Thiruvakoundanur, Salem-636 005.  
Phone : 9362112080  
**(Mr. S. MICHAEL JAYARAJ)**  
**Consultant Psychologist**

## APPENDIX- G

### Chi-Square Test

Association in the level of stress, anxiety and depression in the infertile women with the selected demographic variables

a) Association in the level of stress with the selected socio-demographic variables

n=40

S. No	Socio-demographic Variables	Level of stress		df	$\chi^2$	Table value
		No stress	Mild			
<b>1</b>	<b>Age in years</b>					
	a. 20-25	2	5	4	3.65	9.49
	b. 26-30	2	4			
	c. 31-35	7	4			
	d. 36-40	4	8			
	e. 41-45	1	3			
<b>3</b>	<b>Education</b>					
	b. Primary school	0	6	4	6.68	9.49
	c. High school	2	4			
	d. Higher secondary school	4	7			
	e. Under Graduate	7	5			
	f. Post Graduate	3	2			
<b>4</b>	<b>Occupation</b>					
	a. Home maker	7	8	3	0.673	7.81
	b. Business	5	8			
	c. Private employee	2	5			
	d. Government employee	2	3			
<b>5</b>	<b>Family income per capita</b>					
	a. Below Rs. 2000	1	8	3	36.64*	7.81
	b. Rs. 2001-5000	2	7			
	c. Rs. 5001-10000	8	6			
	d. Above Rs. 10000	5	3			
<b>6</b>	<b>Type of family</b>					
	a. Nuclear family	14	18	1	0.935	3.82
	b. Joint family	2	6			

\* Significant at  $p < 0.05$  level

b) Association in the level of stress with the selected personal variables

n=40

S. No	Personal Variables	Level of stress		df	$\chi^2$	Table value
		No stress	Mild			
<b>1</b>	<b>Age at puberty</b>			2	1.6	5.99
	a. Below 12 years	3	3			
	b. 12-14 years	11	14			
	c. Above 14 years	2	7			
<b>2</b>	<b>Regularity of menstruation</b>			1	0.95	3.82
	a. Regular	13	22			
	b. Irregular	3	2			
<b>3</b>	<b>Age at marriage</b>			3	7.64	7.81
	a. Below 20 years	0	5			
	b. 21-25 years	13	15			
	c. 26-30 year	1	4			
	d. Above 30 years	2	0			
<b>4</b>	<b>Type of marriage</b>			1	0.22	3.82
	a. Consanguinous	3	6			
	b. Non consanguinous	13	18			
<b>5</b>	<b>Duration of marital life</b>			4	4.34	9.49
	a. Below 5 years	4	8			
	b. 6-10 years	3	4			
	c. 11-15 years	8	6			
	d. 16-20 years	1	3			
	e. Above 20 years	0	3			

\* Significant at  $p < 0.05$  level

c) Association in the level of stress with the selected infertility related variables

n=40

S. No	Infertility related Variables	Level of stress		df	$\chi^2$	Table value
		No stress	Mild			
<b>1</b>	<b>Previous history of abortion</b>			3	4.7	7.81
	a. Nil	16	18			
	b. Once	0	3			
	c. Twice	0	2			
	d. More than two times	0	1			
<b>2</b>	<b>Type of infertility</b>			1	5.66*	3.82
	a. Primary	16	17			
	b. Secondary	0	7			
<b>3</b>	<b>History of infertility in the family</b>			1	0.22	3.82
	a. Yes	3	6			
	b. No	13	18			

\* Significant at  $p < 0.05$  level

d) Association in the level of anxiety with the selected socio-demographic variables

n=40

S. No	Socio-demographic Variables	Level of anxiety			df	$\chi^2$	Table value
		Mild	Moderate	Severe			
<b>1</b>	<b>Age in years</b>						
	a. 20-25	4	3	0	8	9.97	15.5
	b. 26-30	4	2	0			
	c. 31-35	10	0	1			
	d. 36-40	9	3	0			
	e. 41-45	2	1	1			
<b>2</b>	<b>Education</b>						
	b. Primary school	3	1	2	10	12.23	18.3
	c. High school	5	1	0			
	d. Higher secondary school	8	3	0			
	e. Under Graduate	9	3	0			
	f. Post Graduate	4	1	0			
<b>3</b>	<b>Occupation</b>						
	a. Home maker	11	3	1	8	12.02	15.5
	b. Business	11	1	1			
	c. Private employee	6	1	0			
	d. Government employee	1	4	0			
<b>4</b>	<b>Family income per capita</b>						
	a. Below Rs. 2000	6	1	2	6	8.77	12.8
	b. Rs. 2001-5000	6	3	0			
	c. Rs. 5001-10000	10	4	0			
	d. Above Rs. 10000	7	1	0			
<b>5</b>	<b>Type of family</b>						
	a. Nuclear family	22	8	2	2	1.26	5.99
	b. Joint family	7	1	0			

\* Significant at  $p < 0.05$  level

e) Association in the level of anxiety with the selected personal variables

n=40

S. No	Personal Variables	Level of anxiety			df	$\chi^2$	Table value
		Mild	Moderate	Severe			
<b>1</b>	<b>Age at puberty</b>				4	9.58*	9.49
	a. Below 12 years	4	2	0			
	b. 12-14 years	21	4	0			
	c. Above 14 years	4	3	2			
<b>2</b>	<b>Regularity of menstruation</b>				2	1.18	5.99
	a. Regular	26	7	2			
	b. Irregular	3	2	2			
<b>3</b>	<b>Age at marriage</b>				6	6.99	12.8
	a. Below 20 years	3	1	1			
	b. 21-25 years	21	7	0			
	c. 26-30 year	3	1	1			
	d. Above 30 years	2	0	0			
<b>4</b>	<b>Type of marriage</b>				2	1.22	5.99
	a. Consanguinous	6	3	0			
	b. Nonconsanguinous	23	6	2			
<b>5</b>	<b>Duration of marital life</b>				8	12.34	15.5
	a. Below 5 years	7	4	1			
	b. 6-10 years	6	1	0			
	c. 11-15 years	13	1	0			
	d. 16-20 years	2	2	0			
	e. Above 20 years	1	1	1			

\* Significant at  $p < 0.05$  level

f) Association in the level of anxiety with the selected infertility related variables

n=40

\* Significant at  $p < 0.05$  level

S. No	Personal Variables	Level of anxiety			df	$\chi^2$	Table value
		Mild	Moderate	Severe			
<b>1</b>	<b>Previous history of abortion</b>				6	15.28*	12.8
	a. Nil	27	6	1			
	b. Once	2	1	0			
	c. Twice	0	1	1			
	d. More than two times	0	1	0			
<b>2</b>	<b>Type of infertility</b>				2	4.03	5.99
	a. Primary	26	6	1			
	b. Secondary	3	3	1			
<b>3</b>	<b>History of infertility in the family</b>				2	0.91	5.99
	a. Yes	6	2	1			
	b. No	23	7	1			



g) Association in the level of depression with the selected socio-demographic variables

S. No	Socio-demographic Variables	Level of depression				df	$\chi^2$	Table value
		Minimal	Mild	Moderate	Severe			
<b>1</b>	<b>Age in years</b>							
	a. 20-25	2	5	0	0	12	23.43*	21
	b. 26-30	3	2	0	1			
	c. 31-35	6	4	1	0			
	d. 36-40	9	0	1	1			
	e. 41-45	1	0	4	2			
<b>3</b>	<b>Education</b>							
	b. Primary school	1	1	2	2	12	12.43	21
	c. High School	4	1	0	1			
	d. Higher Secondary School	6	3	1	1			
	e. Under Graduate	7	4	1	0			
	f. Post Graduate	3	2	0	0			
<b>4</b>	<b>Occupation</b>							
	a. Home maker	8	6	0	1	9	11.51	16.9
	b. Business	8	1	2	2			
	c. Private employee	3	1	2	1			
	d. Government employee	2	3	0	0			
<b>5</b>	<b>Family income per capita</b>							
	a. Below Rs. 2000	4	1	2	2	9	20.72*	16.9
	b. Rs. 2001-5000	3	4	0	2			
	c. Rs. 5001-10000	9	3	2	0			
	d. Above Rs. 10000	5	3	0	0			
<b>6</b>	<b>Type of family</b>							
	a. Nuclear family	16	8	4	4	3	2.55	7.81
	b. Joint family	5	3	0	0			

\* Significant at  $p < 0.05$  level

# h) Association in the level of depression with the selected personal variables

n=40

S. No	Personal Variables	Level of depression				df	$\chi^2$	Table value
		Minimal	Mild	Moderate	Severe			
<b>1</b>	<b>Age at puberty</b>					6	10.68	12.8
	a. Below 12 years	4	2	0	0			
	b. 12-14 years	15	7	2	1			
	c. Above 14 years	2	2	2	3			
<b>2</b>	<b>Regularity of menstruation</b>					3	1.31	7.81
	a. Regular	18	10	3	4			
	b. Irregular	3	1	1	0			
<b>3</b>	<b>Age at marriage</b>					9	22.23*	16.9
	a. Below 20 years	1	0	1	3			
	b. 21-25 years	18	8	2	0			
	c. 26-30 year	1	2	1	1			
	d. Above 30 years	1	1	0	0			
<b>4</b>	<b>Type of marriage</b>					3	1.73	7.81
	a. Consanguinous	6	2	1	0			
	b. Non consanguinous	15	9	3	4			
<b>5</b>	<b>Duration of marital life</b>					12	40.64*	21
	a. Below 5 years	3	9	0	0			
	b. 6-10 years	3	2	1	1			
	c. 11-15 years	13	0	1	0			
	d. 16-20 years	2	0	1	1			
	e. Above 20 years	0	0	1	2			

\* Significant at  $p < 0.05$  level

i) Association in the level of depression with the selected infertility related variables

n=40

S. No	Infertility related Variables	Level of depression				df	$\chi^2$	Table value
		Minimal	Mild	Moderate	Severe			
<b>1</b>	<b>Previous history of abortion</b>					9	45.52*	16.9
	a. Nil	21	11	2	0			
	b. Once	0	0	2	1			
	c. Twice	0	0	0	2			
	d. More than two times	0	0	0	1			
<b>2</b>	<b>Type of infertility</b>					3	26.78*	7.81
	a. Primary	21	10	2	0			
	b. Secondary	0	1	2	4			
<b>3</b>	<b>History of infertility in the family</b>					3	0.161	7.81
	a. Yes	5	2	1	1			
	b. No	16	9	3	3			

\* Significant at  $p < 0.05$  level

## APPENDIX- H

### Certificate of Editing

**JOSE SEBASTIAN P., MA, LLB**

**Advocate**

Padippurackal

Chunkom, Kolani P.O.

Thodupuzha, Kerala - 685 584

**Mob: 9961210476**

E-mail:jpaddippura@yahoo.co.in

Date: 1-1-11

### CERTIFICATE

Certified that the dissertation paper titled 'Effectiveness of Progressive Muscle Relaxation Technique on Stress, Anxiety and Depression in Infertile Women' by Ms. Anu C. Vijay has been checked for accuracy and correctness of English language usage, and that the language used in presenting the paper is lucid, unambiguous, free of grammatical/spelling errors and apt for the purpose.



(Jose Sebastian.P., MA (Eng), LLB)

**Jose Sebastian P., MA, LLB**

**Advocate**

**Roll No. K/903/08**

**TPS Nair & Associates**

**Court Road, Muttom, Thodupuzha**

## APPENDIX- I



